

MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

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BALTIMORE, JULY 19, 1895.

Pig-Iron Production.

While the weekly capacity of the furnaces in blast on July 1 was 13,970 tons greater than on June 1, having been 171,194 tons on the former date against 157,224 tons on the latter, yet the gain over January 1 of the present year was less than 3000 tons. On December 1, 1894, the weekly capacity of furnaces in blast was 168,762 tons, and on January 1, 1895, 168,414 tons. From this there was a general decrease to 156,554 tons on May 1. Thus, notwithstanding the very marked increase in prices, there is a difference of less than 3000 tons increase in capacity over the furnaces running six months ago. Quite a number of furnaces are preparing to go into blast, but it is questionable whether there can be any such great increase as some are anticipating within the next six or twelve months. It will be necessary to make arrangements for ore and coke supplies, and by the time the furnaces which are now preparing for operation blow in, other furnaces that are now running will have to go out of blast for repairs. The latter will partially counterbalance the new furnaces going into operation. In this way it is not probable that there will be a very great increase in productive capacity for some months to come, although there will of course be a gain over present figures. Reports indicate that consumption is running well ahead of production, and during June there was a decrease in stocks on hand, as reported by the Iron Age, of over 100,000 tons. On May 1 the total stocks were 780,729 tons; by June 1 this had been reduced to 648,132 tons, and by July 1 to 543,382 tons. It is a well-known fact that some of the largest iron producers in Alabama would prefer that there should be no further advance in prices, being well satisfied with the present rate of profit, and fearing that any great increase in price may bring into operation an era of furnace-building to increase competition. But this is a vain wish. A number of new furnaces will be built if the present activity continues.

The South Needs to Advertise.

Hon. Josiah Patterson, in an interview in Savannah in regard to the progress of that port, said:

You don't advertise yourselves enough. You have without doubt the finest Southern seaport, but its advantages must be known to be appreciated.

The advice which Mr. Patterson gave to the Savannah people is applicable to the people of the entire South. We have been so long prone to boast of our unrivalled natural advantages that we hardly appreciate the necessity of eternal vigilance and work if we wish to attract money and business to the South. We cannot afford to sit down and wait, expecting that because of a fine climate, attractive scenery or great mineral or timber wealth the world is coming of its own accord this way. It is the hustling town, just as it is the hustling man, which succeeds in this world; and every town and every county in the South might follow Mr. Patterson's advice to the people of Savannah with great advantage. The Immigration and Industrial Association of Texas, the organization of which was recently mentioned in the MANUFACTURERS' RECORD, believes in this, and is determined to attract attention to that State if energy and hard work can do it. This association is endeavoring to stir up every city in the State to united work in order that the advantages of Texas may be made widely known. In a letter which has just been sent out by the association to all the mayors and county judges of the State some homely truths are stated. It is said:

A dead or dull city, town or community is like a slick wall—simply a place where a man can't get up. The world is always holding out its hands to take hold of live men, live cities, live towns or live communities, for such places have rounds or steps to go up.

When God wanted to appoint a successor to Elijah, he did not take an idle man in a dull town or community, but he selected Elisha, who was alive, busy at work plowing.

The live, unselfish, patriotic men of our State have determined to do something to develop Texas. This country is like a ship loaded too heavily on one side, the heavy side being New York, where our money drifts.

We have made an important step—the Texas Immigration and Industrial Association, organized at Dallas, June 5; object, the promotion by co-operation of all Texas. Its purposes:

First—To get 100 organized commercial or industrial bodies to become members of this State organization, to work unitedly.

Second—Thus, by united strength, to secure governmental aid to canalize Texas rivers.

Third—Thus unitedly invite desirable immigration, factories, capital and railroad building.

Fourth—Thus unitedly advertise Texas as a field for investment, its soil, climate, rainfall and general advantages and inducements.

Fifth—To work generally for the promotion, development, upbuilding and industrial advancement of our grand State.

To do these we must secure the co-operation of—

1. The newspapers.
2. The railroads.
3. The co-operation of every community.
4. The help of our senators, congressmen, governor, legislators and public spirited, wide awake, aggressive men.

When the entire South shall have buckled down to the business of attract-

ing outside attention, of making known its advantages for the investment of money and the location of industrial establishments, then this section will develop in proportion to the abundant blessings which nature has given it.

Of course, the proper way to advertise is through the MANUFACTURERS' RECORD and the *Southern States* magazine.

Time to Hustle.

Commenting on the editorial in the last issue of the MANUFACTURERS' RECORD urging the South to make a liberal display at the Atlanta Exposition, the Constitution says:

Our contemporary thinks that it is unfortunate for the South that our people rely too much upon the natural advantages of the country and do not realize the absolute necessity of eternal push and hustling and unending advertising in telling others what we already know. The Southern States threw away their opportunity at the World's Fair, and if they now repeat their mistake they will lose the greatest advertisement which they have ever had the opportunity of securing.

The resolutions passed by the Houston Business League declare that our exposition will be perhaps the best opportunity ever offered the Southern States for an exhibition of their matchless products, the World's Fair not excepted. Texas is urged to get ready for it without delay, and every city, town, commercial organization and railway in the State has been requested to send delegates to the State convention in Houston on the 15th, in order that ways and means may be devised for the proper representation of Texas at Atlanta.

This is on the right line. Besides the splendid exhibits from the North and West and from the Spanish-American and other countries, we are very anxious to see a fine display of the matchless resources of this region. It is our one chance to bring the outside world in touch with the South, and it should not be neglected. If we could have things as we wish, the advantages and attractions of the South should be presented at the exposition on a scale so extensive and magnificent that their splendor would dazzle the world and tempt enterprise and capital from every quarter of the globe. The time is short and our neighbors should bestir themselves.

A Valuable Exhibit.

A dispatch from Atlanta states that space in the transportation building of the Cotton States and International Exposition has been awarded for the model of the Nicaragua Canal which was exhibited at Paris. The model is fourteen feet by forty feet in size, and is a representation in relief of the entire canal from San Juan del Norte, on the Caribbean sea, to Brito, on the Pacific. The national character of the canal and its special importance to the development and extension of the industries of the South make it an exhibit of unusual interest in this section. The MANUFACTURERS' RECORD trusts that the model will be shown at every coming exposition in the South. It is a valuable object-lesson to educate people to the benefits of this great project.

THE Birmingham (Ala.) News, referring to the demand for laborers, says:

Laborers have been coming here from Florida, Georgia, Kentucky, Pennsylvania, Ohio and many other States within the past few weeks. All have been given work, and there is room for more still.

How to Secure Settlers.

The Worcester (Mass.) Spy, one of the friendliest papers to the South in New England, in a recent issue points out the work which California is doing to attract settlers as a suggestion of what the South ought to do. Unfortunately, most Southern people and many Southern railroads do not seem to appreciate the necessity of hard work and liberal expenditures in attracting settlers. California and other Pacific-coast States and many Northwestern States know from experience what immigration means in upbuilding, in the creation of wealth and in all that goes to make a country great and prosperous. They also know that to secure immigration on a large scale demands just the same character of energy which enables a business house to draw trade from all over the world. They are at work, and while the South is doing a little, it ought to increase its efforts a hundred-fold. The Spy, in commenting on these things, says:

California, always foremost among the States that have vast unsettled areas to offer inducements to immigrants, has sent a San Francisco merchant to London to make arrangements for exploiting the advantages of that State, and attracting British settlers to it. Mr. Easton, senior partner of the San Francisco firm, is negotiating with the Wilson and White Steamship Lines for the transportation of emigrants and an expansion of the trade of California. He will soon open in London a permanent exhibition of California products and is arranging for a lecturing tour in the provinces, in making which he intends to set forth the advantages of California to British homeseekers.

Our Southern friends who are exceedingly anxious to increase their white population would do well to pattern by California's enterprise. For that matter they would make a decided hit if they would do something of the kind in New England. It would be a very easy matter to divert considerable of the immigration now steadily flowing from these States to the West to the most desirable sections of the South, if those interested would use ordinary "gumption" to accomplish it.

In 1883 North Carolina and Tennessee secured large results, both in desirable immigration and in capital put into new enterprises, by the exhibits they respectively made in Boston, and by the great quantity of printed information they then circulated. Had those States kept up for several years the movement they then inaugurated, by sending intelligent, practical men on lecturing tours through our towns and villages every fall and winter, they would have added steadily to the first results of their enterprise.

New England is not anxious to get rid of any of her sons and daughters of the old stock. She would much prefer to have them stay at home, but she cannot repress that spirit of adventure that has always been characteristic of her youth and has sent them all over this country and all over the world as well. Before the West was opened by railways her sons and daughters went to the South, and there is not a city there of any account that does not number some of their descendants among its foremost citizens.

In a general way all New England knows about the South. Details are lacking. Specific information is needed. Our immigrants are not people of elegant leisure, who can spend months or even weeks in prospecting the South's broad areas. They are too busy for that. Nor are they of the class that is captivated by glowing pictures or fervid oratory, or poetic descriptions. They are much too practical to be seduced by these. They are regular Gradgrinds in their demand for facts, and when statements of alleged facts are made they find ways of their own to verify them. And so we repeat, if our Southern friends wish to draw to their Eldorado the best

immigration that goes forth from New England, let them seek it in a sensible, business-like way and they will get it.

A Hundred-Fold Return.

Mr. W. P. Blasingame, dealer in farm and fruit lands, Fort Valley, Ga., has had an advertisement in the *Southern States* for the last six months. In paying for it and ordering its renewal in double the space, he writes:

It affords me pleasure to pay this, for the outlay has yielded more than a hundred-fold in returns. Your magazine surely covers the whole land. As a direct result of my advertisement in it, I have had inquiries from nearly every State in the Union, and a great many especially from the Northwest. It has been the means of bringing several investors and settlers here, for we only need to get people to come and see this country to induce them to invest or settle. The single line in my advertisement stating that I could furnish "gilt-edge" 8 per cent. real estate mortgages has interested several investors, and already, as a result, one man from Massachusetts has come and arranged with me to organize a loan and trust company.

Your magazine has been worth much to me and to this section, and, I believe, a blessing to the whole South. I believe that the *Southern States* is the best friend the South has ever had.

Every town and every property in the South desiring to attract the attention of Northern and Western buyers should advertise in the *Southern States* magazine. It is published by the Manufacturers' Record Publishing Co.

A COMBINATION has been formed by the Tennessee Coal, Iron & Railroad Co., the Sloss Iron & Steel Co. and other leading coal-producing companies, resulting practically in a pooling of the coal business of Alabama for the advancement of prices of coal.

Developing Water-Power at Columbia.

Referring to the report in last week's issue of the MANUFACTURERS' RECORD that the Columbia Water Power Co., of Columbia, S. C., would establish a central power plant, Mr. Charles K. Oliver, of Columbia, writes as follows:

"It is the idea of the company to put up at first a plant capable of furnishing about 2000 horse-power, this to be increased as rapidly as the demand will warrant. The power will be furnished in small units at very low prices; in fact, the figures are so low that there is no known power that can compete with it, considering the saving that will be made in the construction of mills and of manufacturing buildings, and the saving in shafting, belting, etc., together with the fact that the investment of an electric-lighting plant is saved, inasmuch as the light current is taken from the same wires that the power comes from, transforming being simply necessary. The power that this company will furnish being quite as cheap as water-power, it will enable small investors that are not prepared to pay out their capital to develop either a steam or a hydraulic plant to obtain power at a very nominal cost."

MR. T. M. BARNA, of the American Loan & Trust Co. of Atlanta, on behalf of his own company, and also as representative of the land and immigration department of the Southern Railway Co., sailed for England last week for the purpose of establishing offices in Great Britain and on the Continent. For the present offices will be opened in London and probably in Paris. Mr. Barna goes abroad well-loaded with information in regard to the South, and expects to make a vigorous effort to attract capital and immigration to the Southern States.

ONE of the recent orders for Tennessee marble comes from Lantz & Co., of Buffalo, N. Y., who have the contract for marble work on the Monroe county courthouse at Rochester, N. Y. About 7000 cubic feet of marble will be required.

LETTERS FROM TRADE ORGANIZATIONS.

In reply to letters addressed to trade organizations in the South suggesting the desirability of special efforts being made to secure a diversification of industrial interests, the MANUFACTURERS' RECORD has received a number of communications of general interest. Some of these point out what is now being done, and others tell of advantages for new enterprises.

A Favored Locality.

BOARD OF TRADE, }
GAINESVILLE, FLA., June 19. }

It has hitherto been held that East Florida could not produce good building brick, but a gentleman from Mobile, Ala., came over here a few months ago and upon investigation found an excellent bed of red clay within a mile of the city and near one of the railroad lines. From this he is now making as good and as good-looking brick as we have been getting from the clay hills of Georgia. The movement for the establishment of a canning factory has resulted in securing sufficient funds to erect such an industry, but as it was late to begin in hope of getting out a fair and paying sample of the product, it was decided to let the matter lay over until next year. If you could see the vast quantities of red-ripe tomatoes now becoming a dead loss to the growers in this section, you would certainly say that a canning factory would pay well here. Our building boom continues unabated. A large two-story brick livery stable has just been completed, and two new two-story brick business houses are in process of erection, while fine residences continue to go up; still there is only one house to rent in the place. Your readers probably would like to know how the great orange industry is getting along. We will not ship any oranges from Gainesville next year, but in the year after that we will be in shape to do some good work. Have no fears for Florida. In five years the orange industry will be almost as good as ever, with the prospect of all the State being set to the trees. Groves immediately around Gainesville are in fine condition, with some blooms on the new growth, but, of course, these will amount to nothing, except to show the great recuperative qualities of the State. This seems to be a favored locality; the lands are rich, climate good, water good and health good, with the best facilities for transportation in the State. McArthur & Warner are now erecting a plant for the manufacture of baseball bats, spokes, handles, etc. I saw some bats of their make used in a game of ball yesterday, and they were the best on the ground; the grain was fine and straight. Few people have a correct idea of the wealth of wood in this State. They all seem to think our woods are brash and poor. This is not the case. Woodworkers from Michigan and Canada say our woods, with the exception of hickory, are the finest in the world, but that the hickory is not as tough as Northern hickory. Several new smaller industries have been started and others have been enlarged. We have had no failures and none expected. Real estate is not on a boom, but transfers are frequent, while immigrants come in even now in the heat of summer. Two more railroads will be built here in the near future. JAS. O. ANDREWS, Secretary.

Good Point in Texas.

BOARD OF TRADE, }
MEXIA, TEXAS, June 17. }

Our town, Mexia, situated on H. & T. C. R. R., 180 miles north of Houston, eighty miles south of Dallas, with a population of 3000, ships annually 40,000 bales of local cotton, does a large volume of business, has two banks, an ice factory, electric lights, water-works system, fine gins, com-

presses, etc. There is now a fine opening for an oil mill and canning factory. No better point in the State can be found for these two industries. A packery, we think, also could be made a paying investment here. T. BENNETT, Secretary.

Tobacco and Leather.

YOUNG MEN'S BUSINESS LEAGUE, }
SANFORD, FLA., June 21. }

Florida has become a great cigar and tobacco centre, especially for clear Havana goods. This industry is receiving more attention at present than anything else. Every town of any importance has one or more factories, but there are other lines that we are beginning to wake up to, and which promise a great deal.

The tanning business has bright prospects. We have an unlimited supply of saw palmetto, the roots of which make splendid tannin. This material can be had for \$2 per ton, against \$12 to \$14 for oak or hemlock. A German company started a tan-yard here about a year ago, and has twice increased the capacity of the plant, and is again considering putting in additional machinery. In conversation with one of these gentlemen recently he said that he had been in the business all his life, and that the palmetto root was as good or better than any other material for tanning, and that there was no comparison as to price. The supply of hides is large, this being a great cattle country.

Another industry that can be made a success in this section is the manufacture of starch and tapioca from the cassava root. This plant will produce fifteen to twenty tons per acre on average soil without fertilizer; it grows the year round, and only requires replanting every third or fourth year.

There is an abundant supply of pure artesian water to be had here, and labor and fuel are cheap.

C. D. LEFFLER, President.

Lynchburg's Advantages.

BOARD OF TRADE, }
LYNCHBURG, VA., June 15. }

I have been trying to look into the matter and determine what kind of manufacturing Lynchburg offers the best facilities for. Manufacturers are all we need to build up a large and prosperous city, for, as you are doubtless aware, Lynchburg is well situated as a distributing centre, and very few cities of its size do anything like its volume of wholesale business. Our railway facilities are first-class, and almost any line of manufacturing would be likely to succeed here. There is no water-power immediately at the city, but a few miles up the James there is excellent power, which formerly ran our nail works, and at present this is idle. GEO. H. GILMER, Secty.

Bright Prospects for Natchez.

BOARD OF TRADE, }
NATCHEZ, MISS., June 20. }

While business is a little dull just now, owing to the season, we anticipate lively times this fall, for the following reasons:

The low price of cotton last season made the merchants advance less supplies; so the farmers have been compelled to live cheaper than heretofore, and they will have more money this fall. Then, too, they see the advantages of a diversified crop. It is estimated that the reduction in cotton acreage is 25 per cent., and the increase in corn acreage is at least 50 per cent.

Our leading capitalists have just organized a company to build a large independent cottonseed-oil mill, which will be in operation about November. This will keep the price of cottonseed up.

The fruit crop will be very large. Peaches and watermelons are on the market now and bringing good prices.

The vegetable crop has been very profit-

able. Any company that understands the canning business could make money by starting a factory here. We use in the neighborhood of twenty-five carloads of canned tomatoes alone in a year, to say nothing of what the surrounding territory uses. JAMES W. MILLER, Secretary.

Need Woodworking Plants.

CHAMBER OF COMMERCE, }
WINSTON, N. C., June 15. }

We have through this section the finest timbers (hardwood) in the country. Any industry which can use these timbers will be a success. In this town we need and will support furniture factory, carriage and buggy factory, shuttle-block factory, shirt factory, trousers factory, apple-butter factory, shoe factory, snuff factory, pickle factory, cheroof factory, fertilizer factory. W. A. BLAIR, Secretary.

Will Encourage Factories.

YOUNG MEN'S BUSINESS LEAGUE, }
PENSACOLA, FLA., June 18. }

We want and will encourage in proportion to the amount and character of labor employed (skilled or unskilled) plants for the production of cigars, leather, wooden and steel implements, canning factories, paper mills, glass factories, foundries and machine shops, cotton mills, and, in fact, industries of every character that can find profitable place in the South. We mean business in inviting investors to come here, for materials are accessible and cheap, lands abundant and low-priced, our harbor as good as the continent can boast of, railroads offer inducements in facilities for shipping at low rates, while water-transportation rates are nominal. Salt, hides, hoof and horns and almost all South American products can be landed at Pensacola free of freight charges, save the vessel's cost of loading and unloading ballast. The climate is unsurpassed in salubrity and healthfulness. C. F. MARSH, Sub-Committee.

Centre of Lumber Industries.

YOUNG MEN'S BUSINESS LEAGUE, }
MEMPHIS, TENN., June 21. }

Your suggestion that attention should be given to other matters as well as to cotton; that in view of the remarkable variety and abundance of the South's materials for the widest diversity in manufactures, it becomes important to give encouragement to other lines of industrial activity, is timely and wise.

The greatest inland cotton market in the world ought not to be without the means of working the raw cotton into cloth, and Memphis should become a cotton-manufacturing centre.

But Memphis is also the actual centre of that part of the South which contains over 200,000,000 acres of forest lands—over one-half of the woodland area of the United States—consisting of almost every variety, except such as is peculiar to the extreme West and North; where over 600 saw mills are in operation, employing over 78,000 hands, and where the output of the planing mills in 1890 amounted to over \$22,000,000.

With so great a supply of such raw material almost at our doors, it seems to be an inviting field for woodworking industries. Already the largest hardwood-lumber market in this country, and a great leading market for lumber of all sorts, it must become at no distant day the headquarters for woodworking industries of all lines.

Memphis is in close proximity to the coal and iron fields of Alabama, and there are in Tennessee unlimited resources of coal and iron upon the same general veins which are now being successfully worked in Alabama, all right at the gates of this city.

It is apparent then that this city is most favorably situated for the manufacture of all articles into which wood and iron, or either separately, enter as raw materials.

In the heart of the standing timber now remaining in this country; in easy reach of the iron and coal of Alabama, Arkansas and Tennessee; the great market for cotton

from six States; with transportation facilities over eleven trunk lines of railroad; on the banks of the great Mississippi river—Memphis offers inducements for the widest diversity in manufactures. And situated in the best agricultural district, the only section that is not fully developed from the agricultural standpoint, Memphis is a great distributing point and commercial centre.

R. H. ALLEN, Secretary.

Raising Walnut Trees.

CHAMBER OF COMMERCE,
SAN ANTONIO, TEXAS, June 20.

The test of English-walnut culture is proving phenomenally successful, and I believe the culture of the English or French walnut tree is fraught with more promise to Southwest and Southeast Texas than any other agricultural development yet considered. Where California has one acre adapted to English-walnut orchards we have hundreds. The United States are heavy importers of the nuts and oil made from them, the importation from France alone being estimated at about \$1,000,000 per annum. Your work in the interests of the South is not unnoticed or unappreciated, and must mean some day more than simple gratitude.

L. M. WELTON, Secretary.

An Iron-Making Centre.

COMMERCIAL CLUB,
BIG STONE GAP, VA., June 24.

Big Stone Gap is at the junction of the Cumberland Valley division of the Louisville & Nashville Railroad and the South Atlantic & Ohio Railroad. It is also at the junction of the north and south forks of Powell's river, the north fork of which at this place breaks through the Stone mountain, making a water-level route for railroad and other travel between the great coalfields which adjoin this mountain on the north and west and the iron ore lying in the Wallen's Ridge on the south and southeast. The Louisville & Nashville Railroad unites at Norton, fourteen miles east of this place, with the Norfolk & Western Railroad, affording a direct through line between Norfolk and the East and Cincinnati and Louisville and the West. The South Atlantic & Ohio Railroad extends from the coalfields to the north and west of this place to Bristol, Va. and Tenn., sixty-five miles east of us, where it connects with the new Southern Railroad, and also with the Norfolk & Western and the Bristol, Elizabethton & North Carolina Railroad. The Kentucky Union Railroad is completed from Lexington, Ky., to Jackson, Ky., a point about seventy miles northwest of this place, and will be pushed to this place as speedily as possible.

The chief industries here will be the iron, coal and coke industries, but there are extra inducements to a number of other industries. The Jennie furnace of the Appalachian Steel & Iron Co. has been in continuous operation since May, 1892, and is now running at full capacity. Iron of a high grade is made at about \$7.35 per ton. This can be greatly cheapened when coke is made at home. It is now brought from Pocahontas, 125 miles east of this place. The iron ore is got from Wallen's Ridge, within one to three miles of the furnace. The limestone is within sight of the furnace. The ore is chiefly the red hematite and yields 48 per cent. of iron. There is an inexhaustible quantity of iron and it is mined easily and cheaply.

The Virginia Coal & Iron Co., which owns 62,000 acres of coal lands lying nearest the town and the railroads, has just now for the first time made a start in developing its property. The contract has been let to build about five miles of railroad connecting the heart of its coal lands on Calahan creek with the two railroads just mentioned. The work is now going on. It will be followed by the construction this fall of 200 coke ovens or more, and it is the purpose of the company next year and

shortly thereafter to continue the building of coke ovens until their number reaches from 1000 to 2000. Coke from this coal is equal to, if not superior to, the Flat Top coke. The coal vein is about seven feet pure coal above water-level and an ideal vein for mining.

In this county, Wise, there are now about twenty coal-mining operations in full blast, with a number of others shortly to start.

The MANUFACTURERS' RECORD and the *Southern States* are doing a great work for the South, and our people know and appreciate the fact. Success to both enterprises.

R. T. IRVINE, Secretary.

Wealth in Timber Lands.

YOUNG MEN'S BUSINESS LEAGUE,
AUGUSTA, GA., June 18.

As diversity in industry, as well as in agriculture, is the true secret of the up-building of a country, and as the cotton industry seems about to overshadow the numerous opportunities for profitable industrial investment in the South, I desire to direct the attention of investors to the wealth in the timber forests that abound in this section, and especially within a few miles of this city. Some months ago the league sent a man out for the especial purpose of investigating this feature of our undeveloped resources, and this investigation demonstrates conclusively the great opportunity for investment in any industry that requires lumber as a raw material.

That the South is pre-eminently adapted to manufacturing is demonstrated by the wonderful success achieved in the cotton industry, and I can see no reason why the manufacture of furniture, wagons, cars and a multitude of small things made of wood should not prosper even in a greater degree right here in Augusta, where we have an almost inexhaustible supply of yellow pine, oak of all kinds, sycamore, ash, gum, cottonwood, which, when dried, is almost as light as white pine, cypress, poplar, and in addition to these, we have available in smaller quantities, but nevertheless ample for their purposes, hickory, cherry, walnut, beech and cedar. The characteristics of yellow pine, oak, ash, hickory, cypress, poplar, cherry and walnut are well known.

The first four, viz, pine, ash, oak and hickory, are especially desirable for heavy construction of any kind, as well as for cabinet work, furniture-making and fine interior finish for residences and other buildings. The sycamore and cottonwood are not so generally used, for the reason that they are not so well known. These two, with oak, ash, cypress, cherry and walnut, are very valuable for fine work, such as the interior of railway passenger coaches, etc. The absence of a home market for any of these raw materials, save yellow pine, has left the immense forests around Augusta almost untouched.

Our people import a large proportion of everything they use, and especially is this true of the products of wood. A furniture dealer informs me that 15 per cent. of the cost of furniture in Augusta is in the freight. This would of itself be a handsome profit, but we have immense advantages which will enable a furniture factory here to compete successfully with any in the country. The nearness to the supply of raw material will of necessity make that cheap; then we have cheap building sites, cheap power and abundant and cheap labor, a good home market, good railroad facilities, including ten railroads through a fertile and growing country to the markets of the United States, and steam navigation to the Atlantic seaboard.

Augusta has 50,000 population, and has an immense trade territory, being the geographical centre of Georgia and South Carolina, in which territory there are 2,988,000 people, three-fourths of whom are white. Augusta is at the head of steam navigation on the Savannah river, compelling low freight rates, her freight rates

to the East being lower than any of the inland cities of the Southeast, and these rates are guaranteed for all time by her water transportation.

The whole South and Georgia in particular is making a progressive fight for immigrants, and the tide is surely turning this way; therefore, I state without fear of contradiction that now is the time, and Augusta is the place for the location of any industry that uses wood as a raw material.

HOWARD H. STAFFORD, Secretary.

Mills Run Night and Day.

BUSINESS LEAGUE,
FLORENCE, ALA., June 26.

Our factories now in operation are doing a fine business. The Cherry Cotton Mills runs day and night and employs 250 persons and is now putting up twelve additional cottages for operatives. The Pump & Lumber Co. employs directly in and around the factory eighty men, and indirectly in hauling and purchasing lumber about 200 men. It ships great quantities of board and other lumber to the East. We have two saw mills in operation, one selling its entire output to the Pump & Lumber Co. and the other shipping East. The Florence Ice Factory is running full time and doing a good local business. The spathite iron furnace is now making a very superior grade of iron peculiarly adapted to the manufacture of stove and other light castings. The Florence Planing Mills is doing a good business. Our crop prospects are exceptionally fine and fruit is plentiful. The outlook for an improved fall trade was never better.

HENRY B. LEE, Secretary.

Chance for Paper Factory.

MERIDIAN, MISS., June 19.

As one of the best opportunities for manufacturing investment in the South I will name the manufacture of wood fibre for paper stock and of the finished paper therefrom. The largest single item entering into the cost of such fibre is the cost of the wood entering into it, and in this item the Southern section of the country has an immense advantage.

There are several woods here which are of superior value for this purpose, among them being gum. This is plentiful and widely distributed, and of very superior quality for this purpose. This gum, with the exception of the larger trees, is of no practical value here, and is what is called second-growth sweet gum (which is very plentiful and of the best sizes to manufacture into paper stock). We have an abundant supply having now no value for any purpose. This wood is of greater value than spruce, which is most largely used in the Northern sections, because it has a greater proportion of better fibre and because it is more cheaply digested. A fibre mill located here would have an advantage in cost of wood alone of fully \$10 per ton of finished fibre. In other items of cost there would be no disadvantage. Next in importance comes sulphur, which can be had as cheaply here; then comes lime and coal, which will probably cost less.

In the common labor required we would probably have a sufficient advantage to fully compensate for our greater cost for the necessary skilled labor. I have recently investigated this matter pretty thoroughly and feel sure of these statements.

If we make this fibre into finished paper we will, until the home market is supplied, save the freight here on the paper. Sulphite fibre is the best stock for making all medium grades of paper; that is, all paper from a superior news to a good writing paper, including all usual grades of book paper, good half-tone paper and wrapping manillas. It is too good a stock to be used by itself in a common newspaper, and while a good quality of imitation linen is made from it, of course it is not fully equal to a genuine linen paper.

Ground wood is the basis of all common

news paper, and in sections of the South where water-power in quantity is available we have great advantages in the manufacture of ground wood over sections where the wood itself is more costly and of not so good quality for the purpose, but I think the promise for chemical fibre here is greatly the best.

Wood fibre for paper and finished paper are both staple articles in the trade, almost as much so as raw cotton and cotton goods; hence anyone could go into this manufacture with no doubt as to the market.

Meridian and vicinity has all the advantages for this manufacture, and our Young Men's Business League will take pleasure in giving full information on all points regarding the advantages we have to offer.

G. W. SOULE.

Paint in Florida.

BOARD OF TRADE,
ST. AUGUSTINE, FLA., June 17.

The best field for manufacture open in this section is for a paint manufactory. There has been discovered in the southern part of this county a fine deposit of a pure iron in shape both of the ore and dissolved in beds. It is wholly free from clay, and in color like yellow and red ochre, or the red is like Prince's metallic. There are many deposits in Florida, but most contain clay, making it difficult to separate. We have artesian water at 200 feet sufficient for a light power and in unlimited quantities. W. W. DEWHURST, President.

For Leather-Makers.

BOARD OF TRADE,
EL PASO, TEXAS, June 18.

I wish to call attention to the many advantages of El Paso, Texas, as a point for the establishment of extensive industries for the manufacture of leather and leather products.

For many years it has been known that the Mexicans and Indians used some indigenous root for tanning purposes, but no attention was paid to it. As in many other instances, outside assistance was necessary to show us the riches at our own doors. In this case a Hamburg firm, dealers in tanning supplies, was the agent. They heard of this root and sent an expert out to investigate. He found the root all that had been claimed for it; but after shipping about 100 carloads to Europe, the fact that it would not stand the sea voyage was demonstrated. The material moulded in some instances on account of the absorption of moisture. This occurred three years ago.

Canaigre is the name of this plant. It belongs to the dock family, and grows wild in immense quantities on the semi-barren plains of this section, but is greatly improved by cultivation, as has been proven by numerous experiments.

It is dug and delivered at the tannery for \$5.50 per ton. It contains from 27 to 33 per cent. tannic acid, and in addition to tanning, it "fills" the leather also, something that neither oak nor hemlock bark will do. Leather can be made here cheaper than elsewhere for the following reasons:

1. Hides are much cheaper, as they are produced here in large quantities and the heavy freights to Eastern points saved.
 2. The tanning agent, "canaigre," costs about as much as the barks per ton, while it will perform at least three times the work.
 3. Cheap labor. The Mexican laborer is unexcelled. He works well and for small wages, and a strike among them is unknown, this last being the greatest advantage of all.
 4. The market for leather being in the West, freights are saved from the tanneries in the East and North to this market.
- We have a small tannery here, established during the last year, which, owing to lack of funds, has for the most part confined its attention to the making of sole leather, though very satisfactory harness

and lighter leathers have been made. Owing to cheapness of production and fine quality of the product, this concern has been able to sell leather at Eastern points. Without question, from 15 to 20 per cent. could be made on the investment.

H. S. BRATTIE, President.

Tuscumbia Progressing.

COMMERCIAL CLUB,
TUSCUMBIA, ALA., June 20. }

Colbert county has been improving rapidly during the last three months. Some large sales have been made to outsiders. Parties from Pennsylvania lately bought three furnaces at Sheffield, two miles from this place, and 70,000 acres of coal and iron lands. We are having some settlers from the Northwest, and some have bought farms ranging in price from \$300 to \$10,000. Lands are cheap at from fifty cents to \$20 per acre, as to quality and locality. Our fruit crop is fine; corn and cotton crop were never better in this section. There is more land in cultivation this year in this county than has been cultivated any year since the war. The Louisville & Nashville Railroad has bought a right of way to this place, and will at once extend its road to here. We are making an effort to get a cotton mill from Pennsylvania, and meet with encouragement.

A. S. STANLEY, Secretary.

Many Opportunities Here.

BOARD OF TRADE,
COLUMBIA, TENN., June 14. }

There seems to be at this time a great flow of capital South for the purpose of building cotton mills, yet there are other lines of industry which can be made as profitable as cotton mills, if not more so. I know of no place in the South more suitable for some two or three industries than Columbia, located as it is on the main line of the Louisville & Nashville Railroad, and the terminus of the Nashville & Florence Railroad and the N. & C. Railroad. Pork-packing would prove especially profitable here. There are no creameries here yet, though the country is peculiarly adapted for them. Fine cattle, superb pasturage, a climate that permits their being run to full capacity all the year round, clear, pure streams, cold springs and ready markets bespeak for him who takes initiative a fortune.

There is no city better located for a canning factory than Columbia. Tomatoes can be canned for five months in the year. Corn, beans, peas, strawberries, raspberries, blackberries, peaches, apples and every other fruit suitable for canning are grown here in abundance. At the low price for which labor, fruits and vegetables can be obtained there is no reason why a canning factory cannot be operated at a handsome profit. There are a number of other industries which could be made profitable in Columbia, namely, a starch factory. Corn of superior quality for making starch is raised here. Thousands of bushels of Irish potatoes too small for market are thrown away. There are annually planted in this county from 7000 to 10,000 acres of Irish potatoes, two crops being raised annually.

Chestnut, oak and other tanning barks can be obtained in abundance near Columbia on the different railroads centering here, making Columbia a desirable point for the profitable manufacture of leather and shoes. Nashville, Birmingham, Cincinnati and other cities could be supplied with leather manufactured here at less cost, as hides can be shipped to this point cheaper than these cities can obtain tanbark. The amount of money spent annually in Middle Tennessee in the purchase of wagons, plows and other farming implements would be sufficient to operate a factory giving employment to 500 hands. The raw material used in manufacturing implements in the North and East is largely purchased in this vicinity, shipped North and returned to us in finished implements, necessitating the paying of freight both ways on this

class of goods. The supply of hardwood necessary to make these goods can be obtained near Columbia. There is now one large cotton mill here, and others could be run with profit. I have given above some of my reasons for thinking other industries will pay. G. W. HAYES, Secty.

Good Place for Factories.

CHAMBER OF COMMERCE,
HUNTSVILLE, ALA., June 16. }

The three cotton mills of this city, working 1000 hands, have made remarkable showings of profits, and all are running constantly on full time. Our city is striving for new industries, and meeting with good success. Within a short time we have located here—

The National Manufacturing Co., specialty monkey-wrenches.

The American Fibre Factory, hickory fibre.

The Russell Handle Factory, hickory handles.

The Johnson Cedar Factory and Mill, cedar specialties.

Two planing and saw mills, doors, etc.

The finest furniture factory in the South, taking its lumber direct from the tree, working 150 hands and making a fine success.

A new process flour mill and lots of small industries. We need another furniture factory, a wagon factory, a hub factory, a spoke factory and a soap factory. Coal is \$1.50 per ton. Free tax, free water, cheap labor and cheap living make this an ideal point for manufacturing of any kind.

W. S. WELLS, Secretary.

Successful Small Plants.

COMMERCIAL LEAGUE,
LITTLE ROCK, ARK., June 24. }

It may interest your readers to know of several small concerns which have recently started up here in a quiet way. Among these is the Little Rock Fence & Wire Co. It employs about ten hands, and starts out under very favorable auspices. Another which has not been mentioned is the Little Rock Chemical Co., manufacturing insect exterminators and disinfectants. Another is the Little Rock Box Manufactory. This concern has been much needed in Little Rock, and it promises to be very successful. It employs about twelve hands, and turns out paper boxes of every variety. Another is the Little Rock Crate Factory, manufacturing crates and boxes suitable for shipping potatoes, fruits, etc. This is a small concern, employing about six hands, but promises a rapid growth.

A great deal of attention has been given during the past year to experiments with new methods of cotton baling and compressing. The Anderson bale, which has just been perfected, is the nearest approach to perfection in cotton baling that has yet been heard of. A bale is on exhibition at the Commercial League rooms weighing 450 pounds, with a density of thirty-four pounds, which is fully nine pounds more than that of the ordinary compress bale. The diameter of the bale is thirty-four inches, and its width twenty-four inches. It is covered with a sheet-iron covering over its outside surface. The Thomas Manufacturing Co., of this city, has the contract for building three new presses. The idea of the machine is to attach it to an ordinary gin. It is said that it will not be expensive. The plan which will be adopted by the owners of this patent has not yet been definitely determined.

A large company has just been organized for the purpose of manufacturing and operating the Thomas delinter, a machine recently brought out by the Thomas Manufacturing Co. for the purpose of removing the lint from cottonseed and burnishing them. This industry promises to work a revolution in the cottonseed business, and to augment the already very large demand for this erstwhile useless product.

Negotiations are pending between the

two commercial organizations of this city and outside parties for the location here of two very large factories which will use wood as their raw material. Matters are not in sufficiently definite shape to justify their publication.

GEO. G. HARKNESS, Asst. Secty.

Bowling Green's Liberal Offer.

COMMERCIAL CLUB,
BOWLING GREEN, KY., June 14. }

Bowling Green, population 10,000, with both rail and river transportation, offers free taxes and free water for five years and excellent factory sites free, and desires—

1. All sorts of woodworking establishments, because surrounded by 5000 square miles of the finest hardwood forest.

2. A canning factory, since the surrounding country produces all fruits and vegetables in the greatest profusion, and is only one night's run from St. Louis, Chicago, Louisville, Cincinnati, Indianapolis, Memphis, Chattanooga and Atlanta.

3. Creameries, on account of fine farming and grazing lands.

4. Lime-kilns, because of abundant quantity and superior quality of limestone—98 per cent. pure.

5. Broom factory, since broom corn is raised abundantly.

6. Stone quarries, because of its very superior building stone.

7. For the production of sugar beets and the manufacture of beet sugar, one company for which is already incorporated and is at work.

8. Knitting factory, pickle factory and vinegar works.

9. Small handle works, cob pipe factory and shoe factory.

10. Manual training and technical school.

Under woodworking establishments I would suggest car works, plow and agricultural-implement works, furniture factory, spoke and handle works, dry-barrel and stove works, especially sugar, whiskey and flour barrels; wagon works, boat building, etc. Steam coal of the most superior quality can be had for seventy-five cents per ton, and freight rates to all points on the Ohio and Mississippi rivers for eight to fifteen cents per hundredweight, and in barge loads for \$1 per ton to New Orleans, St. Louis and Cincinnati.

M. H. CRUMP, Secretary.

A Great Fruit-Growing Region.

BOARD OF TRADE,
VAN BUREN, ARK., July 7. }

Our farm, mineral and timber properties are very extensive, though the fruit-growing industry is taking the lead. The products have been of such magnitude that the results are almost beyond our calculation. During the last week of April and the month of May there were shipped about 300 carloads of strawberries alone, the returns of which were very satisfactory. During June about 1200 carloads of new potatoes were shipped from Van Buren and vicinity to points in the North and West, which netted the grower fifty cents per bushel, and farmers are now planting for the second crop, which will be harvested during September and October, the yield being an average of 200 bushels per acre.

H. H. DILL, Secretary.

Need Wood and Tile Works.

WATER VALLEY, MISS., June 20.

Water Valley has a \$300,000 cotton factory which has paid regular dividends, a machine shop and foundry and numerous smaller enterprises, all in a prosperous condition. The Illinois Central Railroad employs 400 to 800 men in its shops here, and has a pay-roll of more than \$500,000 annually. The forests yield a great variety of timbers of both hard and soft woods. Vehicles, cooperage, furniture and implements manufactured in the city would be near the best of material. The finest of clay for tiling and crockery and brick underlie its soil near the surface.

T. J. MCFARLAND.

REVIVING IRON INTERESTS.

Marked Improvement in the Virginia Iron Districts.

MAKING PIG IRON FOR STEEL.

[Special Cor. MANUFACTURERS' RECORD.]

JOHNSON CITY, July 16.

The iron industry of Virginia underwent a rapid development from 1889 to 1891, twelve coke furnaces and one charcoal furnace being built during that period, besides which several existing plants were enlarged and their capacity increased. Some of these furnaces were built largely as a means of advertising the town in which they were located, and were never put in blast. Others blew in, but as the price of iron declined they found that operations could not be carried on at a profit, so they were blown out, and remained idle during the long period of low prices. Since the early part of this spring, when the price of iron began to advance, the owners of many of these furnaces have been watching so as to be able to start so soon as the price came to a point where a profit would appear. This has come with some plants, and they are actively engaged in making such repairs as are necessary before starting up.

There are practically two iron-producing sections in Virginia—one along the Chesapeake & Ohio Railroad beyond Staunton, Va., and the other along the Norfolk & Western Railroad from Shenandoah, Page county, to Bristol, Washington county. In the first section there are the Alleghany, Longdale, Lowmoor, Princess and Rockbridge furnaces, eight stacks in all, with an annual capacity of 215,000 tons. Of these, all are operating but Rockbridge furnace, at Goshen, at one time known as Victoria furnace. This was remodeled in 1892 and reduced from 85x20 feet to 76x18 feet, and some other changes made at the same time which materially increased its efficiency. Active steps are now being taken to put it in blast. When it was blown out the lining was found practically uninjured and the bosh walls only slightly cut, owing to the excellent results secured from a triple row of bronze water-cooling boxes set around it. At the tuyere line, where the brickwork was not protected, the furnace cut badly, and also in the hearth. Mr. Mahoney, the manager, has ordered a cast-iron water-jacket to go around the tuyere line, and is making some alterations in the hearth which will prevent serious cutting in the future. Some other minor alterations are being made at the furnace, and if work at the ore mines is completed in time the plant will go into operation about September 1.

At the mines, nine miles from the furnace, and just across the mountain three miles from Longdale mines, additional washers are being put in and the old ones repaired, besides making some other alterations and additions. When these are completed it is expected that there will be no difficulty in furnishing all the ore needed at the furnace. When operating the plant uses this ore, which, when well cleaned, will average about 46 per cent. iron. It carries a varying percentage of manganese and phosphorus, however, and it is necessary to watch the former closely, as but a little of it seriously affects the quality of the iron. New River coke is used and limestone from the company's quarries. In this connection it is interesting to note that the Longdale Iron Co. is casting the product of its two furnaces in chills and shipping to the Pennsylvania Steel Co. and Pencoyd Iron Works for use in steel-making. It is stated that casting in chills reduces the silicon in the pig, but this seems altogether improbable. Likely the only advantage derived is that the iron chill gives a pig free from sand, and thus the users avoid introducing into their furnace a large amount of silica, which cuts out their linings. The guaran-

teed analysis of the pig is said to be under 0.05 sulphur, 1.0 silicon, 1.0 phosphorus and 0.5 manganese.

The product is sold for some months ahead at a considerable advance over the current market prices. Rockbridge furnace is considering the advisability of following the same plan. It is estimated that the chills would cost about \$3500, and last, with ordinary care, for eight to ten months. This, at a production of 125 tons per day, would be an added cost of over nine cents per ton on the iron, or when extras are counted, probably twelve to fifteen cents.

Along the Norfolk & Western Railroad comparatively few of the furnaces are operating. Salem, Bristol, Shenandoah, Graham, Pulaski, Max Meadows, one of the Crozer's, Buena Vista and Radford furnaces are out of blast. Buena Vista has been leased by the Rich Patch Iron Co., owner of extensive brown-ore mines at Rich Patch. Dora, at Pulaski, is going, and one of the Crozer furnaces at Roanoke is in operation. Ivanhoe furnace is also in operation. All of these furnaces have been seriously hampered by the strike at Pocahontas. Crozer has bought coke from Pennsylvania. Dora furnace has been compelled to reduce its output, and anticipates banking unless a better coke supply is insured within the next week. Of the furnaces idle Pulaski is repairing so as to go into blast as soon as the coke supply is assured, and Crozer is relining and altering its other stack. A slight change has been made in the ironwork at the latter-named furnace, by which the hearth will be lowered. In doing this the various pipes around the bosh and the hot blast pipe have all been changed. There is some talk of Radford furnace going in, but it is doubtful if anything will be done for some time to come. The Crescent Horse-shoe Mill at Max Meadows is operating steadily. There has been some talk of difficulty in the near future in securing sufficient and cheap ore supply for all of these furnaces. Buena Vista, Crozer, Dora and Pulaski furnaces are secure, but there is a chance that the others, and possibly some of these at no very distant date, may have to draw heavily on the mountain hematites, both those in the upper part of the valley and others south and west of the Norfolk & Western main line. The ores of the Cripple Creek region have been very fully developed, and if drawn on heavily it will be only a matter of calculation how long they may be expected to last.

Throughout the length and breadth of the Shenandoah valley the growing revival in business is clearly shown. There are yet many idle establishments, some built during the "boom" fever without due regard to suitability of location; others idle from bad financing. On the other hand, many have been started. Some are working on a small scale only, growing with the increase in their trade. Of these, nothing is heard. They are moving along steadily, and, what is of most importance, profitably. They are enjoying that steady, sure growth which leads to industrial prosperity. This condition is shown in the bank clearings in the larger towns. In some places the increase since last year has been over 50 per cent., and at others, while smaller, it has nevertheless been sufficient to show the increased volume of business. If, as is now anticipated, the Southwest Virginia Improvement Co. takes active steps to forward its various interests during the coming fall, there will be a still further revival, which will result in placing in operation a number of establishments now idle. This, together with certain steps anticipated when the Norfolk & Western pulls through its difficulties, will result in the rapid upbuilding of all the many interests through the valley. In the meantime it is to be hoped that the Southwest Virginia Company will learn a lasting lesson at Pocahontas. The present difficulty, which

has been brought on through its stubbornness and greed, is holding back the reviving industries, and in the end may react seriously upon itself. H. S. FLEMING.

A \$2,000,000 PLANT.

Developing a New Industry in South-west Virginia.

[Special Correspondent, MANUFACTURERS' RECORD.]
GLADE SPRINGS, VA., July 10.

In the development of Virginia's mineral resources comparatively little has been heard from Washington county, but for many years quite an important industry has flourished there with varying degrees of prosperity. Salt-making was carried on before the trouble in 1861, and during the few eventful years which followed a large portion of the supply of the South came from here. At the close of the difficulties the industry languished, was revived and again abandoned. This was repeated, and finally a company took hold of it, sunk some new and deeper wells and put up a brine-evaporating plant. This succeeded admirably, and some two years ago the project was conceived of converting the salt brine into caustic or carbonate of soda. The Mathieson Alkali Co. was formed. It purchased the property and began the erection of works. Additional wells were sunk, roads built, pipe lines constructed, and finally there is now a model plant, costing, it is estimated, somewhat over \$2,000,000, which will prove a strong competitor for the trade so long enjoyed by the soda plant at Syracuse, N. Y., and the British producers, who have sent us about 400,000 tons a year.

The Mathieson Works have not yet gone into full operation, but, as recently announced exclusively in the MANUFACTURERS' RECORD, a trial was made at the caustic-soda department and excellent results obtained. The company now expects to go into full operation very shortly, and is securing supplies to that end.

On reaching Saltville little can be seen of the company's work, but following the fine road which has been built to the river the salt works are reached. Every available opening is placarded "no admission," so what machinery they contain could not be learned. Just beyond them are large tanks for the strong brine. Further down the road the company has, and is now erecting, a large number of commodious and neat cottages for its employees. Across the valley can be seen a number of more pretentious homes, and between them and the road are several derricks erected over the salt wells. One of these wells, it is said, was a shaft some sixty feet deep, ten feet in diameter and cased with heavy wrought iron. The others are from six to ten inches diameter.

Just beyond them, and three-fourths of a mile from the station, is the company's store and offices, a very large brick building. Half a mile beyond this, on the bank of the Holston river, are the new caustic-soda works. These also are placarded "no admission," and to further this end a watchman is kept at the various gates. All that can be seen from the outside is the large buildings, and on one side a conveyor which takes coal from cars at the siding and lifts it to the top of the three large gas-producers. These are about the size and shaped outside much like Davis-Colby ore-washers.

At the time the works were visited a portion of the caustic works was being run, but no information could be secured as to the results, save that they were "highly satisfactory and most encouraging to the stockholders." From other and apparently reliable sources it is learned that the company is ordering the supplies necessary to start.

One mile from Saltville, at a little place called Buena Vista, which must not be confounded with the town of that name on

the Shenandoah Valley Railroad, there are large deposits of gypsum, occurring in masses of greater or less size in the limestone country rock. For some years past a small company has been mining this and burning to land plaster, which found a ready sale. Recently, however, a "boiler" was put in, and now a fine grade of plaster of Paris is being produced.

The gypsum deposit now being worked is opened to a depth of 130 feet, of which forty feet is in gypsum. A gallery has been driven 110 feet, and cross entries forty feet, and so far the bottom and wall rock has not been encountered. The material is mined by boring a number of holes, using a common auger drill, such as is employed in soft-coal seams, and shooting them together. Very little powder is required. The big lumps are then broken, wheeled to the shaft and hoisted to the surface. Fourteen men are working in the mine, receiving from seventy-five cents to \$1.25 per day, according to their worth.

From the mines the rock is trammed to the works and there passed through a coarse crusher, then a fine crusher and finally ground between heavy millstones. This powder is then placed in a large iron trough and heated to drive off the chemically-combined water. This requires about three hours for each charge in the pan, about four tons, so the capacity is about twelve to fifteen tons per day. Recently it has been necessary to work both day and night to fill orders.

Within a short time a new company will be formed to work in connection with the Buena Vista Plaster Co. in the production of wall plaster. Preparations are now being made to double the output of the present works to provide for this.

The company has been sending down a number of drill holes for the purpose of locating other beds of gypsum, and has found several. It expects also to drive one or two deep holes to see whether or not the salt stratum, which has been reached only one mile up the valley, does not continue. If it finds brine, and it is not at all unlikely that it will, it can either pipe it to the Mathieson Works or erect a small salt works of its own.

About midway between Glade Springs, on the Norfolk & Western Railroad, and Saltville are a number of alum springs. In years gone by there used to be a large hotel near these, and the waters were held in high repute. Now the hotel has fallen to decay, and hardly a vestige of it remains, but just below the springs is a small building where large pans of the waters are evaporated and the alum salt recovered.

The entire region above and below Saltville seems to be rich in various mineral waters, and these and its other mineral resources are almost untouched—indeed, are almost unknown. H. S. FLEMING.

Water-Power Developments.

Messrs. T. B. Fitzgerald, president; R. A. Schoolfield, secretary; S. I. Roberts, superintendent; J. H. Schoolfield, F. X. Burton, J. E. Schoolfield and James G. Penn, directors, of the Riverside Cotton Mills, have associated with them Col. Geo. C. Cabell, M. P. Jordan and others, large land-owners of the valuable water-power situated a short distance above the Riverside Cotton Mills, in Danville and Neapolis. A charter has been obtained under the name of the "Dan River Power & Manufacturing Co." with a capital stock of \$75,000, and privilege to increase to \$750,000. Mr. T. B. Fitzgerald has been elected president; W. P. Bethell, vice-president, and R. A. James, secretary, the board of directors being composed of the above-named gentlemen, with J. H. Schoolfield, F. X. Burton, J. E. Schoolfield and R. A. Schoolfield, whose purpose it is to begin the development of the property at once. A large body of land will be conveyed to the company, together with the water-power, and it is the intention in the future to build cotton mills and other factories.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department, on page 398.]

IMPORTANT RAILWAY PROJECT.

Baltimore Capital to Build a Line Across the Eastern Shore of Maryland to the Ocean.

The project to build a railroad on the Eastern Shore of Maryland, which was referred to at length in the MANUFACTURERS' RECORD several months ago, has reached a point where a company has been formed to insure its construction. This company is entitled the Peninsular Construction Co., which is to undertake the building of the entire line. Its capital will be \$250,000, all of which has been taken by Baltimore people, including George C. Baker, vice-president of the Third National Bank; Gen. Clinton P. Paine, Henry C. Mathews, Wesley M. Oler, W. H. Bosley and John S. Gittings, of John S. Gittings & Co., bankers; Edward Stabler, Jr., president Guardian Trust Co.; Bartlett S. Johnston, Dr. C. H. Tilghman, C. L. Gill, of Martin Gillett & Co., and Basil B. Gordon, of the News Publishing Co.

The promoters have decided to build a road to be operated by steam power instead of the trolley system. It will begin at Queenstown, Md., near the mouth of the Chester river, and extend to Lewes, Del. Two routes have been surveyed for this line, one by way of Denton, Md., and Farmington, Del., and one by way of Denton and Georgetown, Del. The first is six miles shorter—sixty miles in all—but the second would connect with a branch of the Pennsylvania system at Georgetown, and by a traffic or other arrangement the company could use this branch and avoid building considerable mileage. At Lewes the road is to connect with a line running to Rehoboth Beach, about four miles distant, which will enable the company to operate trains directly from Queenstown to the seashore. In addition to the main line, which is almost an air line across Maryland and Delaware, a branch about fourteen miles long is to be built from Queenstown north to Crumpton, Md. This is expected to give Centreville and Chestertown, Md., transportation facilities also. The company proposes to build the road for fast train service. It will be laid with 60-pound steel rails on hardwood ties, and as the country is but slightly rolling, the grades will be but nominal.

One of the main reasons for promoting this enterprise is that it will form the shortest and most direct route to the seashore from Baltimore and Washington. The entire distance from Baltimore to Rehoboth Beach will be ninety miles, of which twenty-six is covered by the steamer trip across the Chesapeake bay and sixty-four is by rail from Queenstown to the beach. It is expected that passengers can be carried from Baltimore in three and one-half hours each way, while the time may be reduced to three hours. At present the time occupied in reaching the nearest seaside resorts to the city varies from four and one-half to seven hours. The company interested in the new line calculates to put on such a train schedule that daily round trips can be made giving at least six hours at the beach.

Another reason for the enterprise is that the road will give Eastern Shore people living along the line and adjacent to it an opportunity to come to Baltimore in the morning, have time enough to transact business and return the same day, thus tending to develop the business interests of the city with this section, and to increase the trade which its merchants now receive from Maryland and Delaware. Anyone familiar with the Eastern Shore of Maryland is well aware that it is quite thickly populated in the section to be traversed by

the proposed road, while it is also an extensive fruit and vegetable-growing section, as well as grain-raising territory. Much of this business has been going North to Wilmington, Philadelphia and New York owing to superior transportation facilities to these cities, and Baltimore grain and truck dealers are too well aware that they have been gradually losing this trade owing to the reasons given. Such a route as proposed will tend to divert shipments to the nearer market, and by reason of its facilities the company can ship by the carload to Baltimore if necessary, carrying cars across Chesapeake bay on floats without breaking bulk.

Such is a brief outline of the project and the reasons which have caused some of the wealthiest capitalists and most conservative investors in Baltimore to aid it financially. It was conceived by a Baltimorean, Mr. W. H. Bosley, who has recognized its value and has exerted himself to bring it to a successful culmination.

The construction company will meet in a few days and will elect officers. The railroad company proper will be formed later with \$800,000 or \$1,000,000 capital to own and operate the road. Most of the right of way has been secured, and contracts for construction of the line may be let before September 1.

Which is Right?

Commenting on reports of railroad construction, the St. Louis Republic says:

"Statisticians of railway journals should have a uniform method of determining new trackage. No two of them agree as to the number of miles built this year in the United States or in any single State or territory. The Railway Age, of Chicago, reports, for example, a total of 641 miles for the entire country, while the Railroad Gazette, of New York, credits us with only 545 miles of new track. Their reports for some of the States differ still more. The new mileage credited by the Age to Colorado, Louisiana, Maryland, Montana and New Jersey is entirely ignored by the Gazette; on the other hand, Michigan and Iowa have each a place in the latter's list, but not in the former's. The Age gives Missouri less than three miles of new track, while the Gazette reports fifteen miles built in this State.

"Both journals place Texas in the lead, but they are twenty-three miles apart in their reports, seventy-eight and 101 being the figures given. Second place is credited by the Age to Arizona, and by the Gazette to Georgia. The New York journal, however, gives each of them more than does its Chicago competitor. In one report Illinois is credited with forty-one and in the other with only eight miles. Arkansas has built forty-two miles of new road this year, according to the Gazette, but in the Age's list only twenty-two are reported. Another big difference is in the returns for Kansas. While the Age knows of eighteen miles of new track laid in that State since January 1, the Gazette could find only one mile."

There is certainly ground for criticism such as the above. Several months ago the MANUFACTURERS' RECORD published a summary of new mileage built in the South in 1894, which was made the text for considerable baseless criticism by the Railway Age. A reference to the reports of both the Chicago and New York papers shows that for several years past they have disagreed widely.

Earnings Increasing.

The earnings of the South Carolina & Georgia Company under its present management are increasing noticeably. Gross earnings for May were \$64,131, and net earnings of \$14,035. For the eleven months ended on May 31 the gross earnings were \$1,021,926, and net earnings, after deducting taxes, \$339,951. These figures show surplus earnings, after taking

out fixed charges, of \$77,451, and the management estimates that for the fiscal year the profit above fixed charges will be approximately \$100,000.

Millions for Improvement.

The Pennsylvania Railroad Co. evidently intends to continue to have its reputation of owning the "standard railroad of America." The sale of \$5,000,000 of its securities to English investors, referred to in the last issue of the MANUFACTURERS' RECORD, was for the purposes of improving the physical condition of the system. This is one of the largest appropriations ever made by a similar corporation solely for improvement purposes.

On the lines east of Pittsburg the largest sum will be spent in the construction of a new bridge across the Delaware river at Frankford. This alone will take nearly \$1,500,000. Besides this, there will be considerable third and fourth track construction on the main line, and other additional work. Abolition of grade crossings on the New York division and elsewhere will also be taken in hand. In all, the amount to be expended on the lines east of Pittsburg will be about \$2,500,000.

On the lines west of Pittsburg the largest expenditure will be in the construction of the bridge at Cincinnati. The old bridge is being taken down and practically a new one erected in its place. The company will also revise the Cleveland & Marietta Railroad, making a low-grade road out of this, which will do away with the tunnel about fifteen miles south of Newcomers-town, on the Panhandle road. The company's share of the construction of the new union depot at Dayton, Ohio, will be \$250,000, and a like amount is to be expended in Columbus in doing away with grade crossings.

On the Panhandle line \$200,000 will be spent in the widening of the tunnels, of which there are two left on this division. This change is made so these tunnels will accommodate a two-track road. Another expenditure is to be made in the building of 1500 cars to meet the demand for lake iron and ore and coal traffic.

It is understood that the principal reason for bridging the Delaware river is to give the Camden & Atlantic division an all-rail connection with the main line by which trains can run to Atlantic City from New York, Philadelphia and other points without transferring passengers across Delaware bay.

Railroads and Receiverships.

According to the New York News Bureau, a "well-informed" railroad man says that few people appreciate the importance of the changes that will take place in the railroad geography of the South during the next few years as a result of the solidifying policy of the Southern Railway Co. That company is getting stronger every day by alliances, by putting its subsidiary and controlled lines like the Central of Georgia on a solid basis and by buying up bankrupt competing lines at nominal figures, such as the Atlantic & Florida and the Georgia Southern & Florida. Many other properties of this class have been struggling with bankruptcy for years or dropping from one receivership to another, and they will inevitably be absorbed at nominal prices and be made valuable as feeders of the Southern Railway system.

The Georgia Southern & Florida was reorganized before the Southern secured it, however. While under the original company it had gone into the hands of a receiver. The term "bankrupt" is a misnomer as applied to it. Many a railroad in the South capable of more than earning its fixed charges even when operated independently has met misfortune on account of mismanagement, extravagance or some extraordinary cause. Unfortunately, too many persons are apt to overlook the real

reasons for placing some of the Southern roads in charge of the courts, and attribute it to inability of the country they traverse to furnish traffic enough to put them on a paying basis, when often the contrary is the case.

A Kentucky Enterprise.

In a letter to the MANUFACTURERS' RECORD Mr. G. L. Prescott, president of the Kentucky Southern Company, gives additional details of the enterprise which has already been referred to in these columns. The route is about forty miles long, and the road is intended to extend from a point on the Louisville & Nashville system into the Rockcastle river valley, terminating near the mouth of that stream, which empties into the Cumberland river. He states that bonds to the amount of \$20,000 per mile will be issued. Construction work is expected to commence in the fall. It is understood that the Prescott Land Co., an English corporation, owns 32,000 acres of coalfields which this road will develop. The incorporators of the company besides the president are W. S. Manning, of Wisconsin; W. H. Kinnaird, L. F. Hubble, R. L. Hubble and R. E. McRoberts, of Lancaster, and James D. Smith, of London, Ky. The incorporators constitute the board of directors with the president; W. S. Manning, vice-president; L. F. Hubble, secretary; Wm. H. Kinnaird, treasurer.

Secretary L. F. Hubble, of the railroad company, writes that the Southern Construction Co. was organized for the purpose of building the railroad. W. S. Manning, of Soldiers' Grove, Wis., is president; G. L. Prescott is treasurer, and the writer, secretary.

Testing Richmond Locomotives.

A party of railroad experts recently took a trip on a compound locomotive built at the Richmond Locomotive Works. The engine is being tested on the Chicago, Rock Island & Pacific system. The trip made was from Blue Island, Ill., west to Winooka, thirty-five miles, and the train consisted of forty cars, the total weight, exclusive of the engine, being 1029 tons. This was hauled easily the whole distance, about eight miles being an ascending grade of twenty-four feet to the mile. The engine was worked compound all the time, the emergency feature of working it as a simple engine not being needed. It is said that this engine has hauled a train of fifty-one cars, the total weight being 1570 tons. The Railroad Gazette, in noting its work, says:

"The engine is of a very neat design, and steams well. The easy way in which the train was handled excited the admiration of all who were on board. Before leaving the Rock Island road it will be tried in fast passenger service also. It has been tried on the Chesapeake & Ohio and Pennsylvania Railroads, but the results of the tests made on the latter have not yet been made public."

The success of the Richmond Works as locomotive builders has caused railroad companies throughout the country to submit specifications to this corporation for bidding on locomotives. The MANUFACTURERS' RECORD is reliably informed that the Pennsylvania Company has been testing the compound type of the Richmond engine for several months, with the view of using it for freight service on heavy grades. If the decision is favorable, the Richmond plant would probably receive the order for a large number of them.

New Line to Galveston.

The Galveston, La Porte & Houston Company has completed its road to Virginia Point on Galveston bay, and is now operating trains between the bay and Houston, thirty-eight miles. It has added several passenger coaches to its rolling stock.

The Georgia Central's Future.

A New York dispatch announces that the last plan of reorganization of the Central of Georgia made public has been ratified by the deposit of enough securities to make it operative, and that the Georgia Southwestern and Savannah & Western Companies will be included. It is to be hoped that this is true, as the longer the property is in the hands of the court the greater becomes the amount of its indebtedness, thus lessening the value of its securities. So many postponements of action have been made that security-holders have become discouraged. It is generally understood and accepted as a foregone conclusion that the system will be operated in harmony with, if not under control of, the Southern, while it is not unlikely that it will become another part of this corporation.

Electric Motor a Success.

The electric locomotive designed to haul trains of the Baltimore & Ohio system through the series of tunnels recently completed at Baltimore has been pronounced a practical success, and will probably be substituted for steam-power in a few weeks to haul all trains through the tunnels. The mechanism employed was detailed in the MANUFACTURERS' RECORD several months ago. As the locomotive is the first of its kind ever built, several preliminary trials have been made since it was put together in Baltimore. The last test, which determined its success, was to attach it to a train of twenty-three cars loaded with coal and lumber, a caboose car, one 80-ton freight locomotive and one 50-ton engine. The total estimated weight was 1300 tons in addition to the motor's weight, ninety-six tons, making a total of nearly 1400 tons. The motor hauled the train through the longest tunnel, and ran from Camden Station to North avenue, nearly one and one-half miles, in five minutes and twenty seconds. Returning, it reached Camden Station without the train five minutes later, making the round trip of nearly three miles in ten minutes and twenty seconds. The steam locomotives were not used at all during the test. The current is secured from the feed cables by what is termed a sliding contact, the electric-power passing through a jointed flexible metallic bar into the motor from a shoe, which slides along a grooved track in lieu of the trolley wire.

Railroad Notes.

MR. JOHN H. KIRBY has been appointed receiver of the Houston City Street Railway Co.

MR. J. P. BOWLING has been appointed traveling passenger agent of the Louisville & Nashville system.

MR. C. R. CAPPS, of Portsmouth, Va., has been appointed general freight agent of the Seaboard Air Line.

HON. A. H. ALEXANDER has been elected president of the North Carolina Railroad, in which the State is part owner.

THE appointment of Mr. D. T. Forbes as general superintendent of the New York, Texas & Mexican section of the Southern Pacific system has been confirmed.

THE Louisville & Nashville is running "banana" trains between Mobile and the Northwest with the view of giving prompt delivery. They are operated nearly as fast as passenger train schedules.

MESSRS. HODSON BROS., of Athens, Ga., and others are forming a company to lease the Northeastern Railroad of Georgia from the State. The line is thirty-nine miles long and extends from Lula to Athens.

THE Panama Railroad Co., operating the line across the Isthmus of Panama, has decided to put a vessel in service between New Orleans and the terminus of its road on the Gulf of Mexico to make monthly trips.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department, on pages 397 and 398.]

A 15,000-Spindle Mill.

A cotton mill of 15,000 spindles is about to be established near Madison, N. C. The Mayo Falls property has been purchased by Mr. F. H. Fries, of Winston-Salem, and he will, with his associates, develop water-power for operating the mill. The company has applied for charter as the Mayo Falls Cotton Mills, capital stock placed at \$300,000, and directors and officers have been elected. Mr. Fries is president, and C. W. Grandy, of Norfolk, vice-president, while B. N. Duke, Geo. W. Watts and Jas. H. Ruffin, of Rocky Mount, are among the directors.

Textile Notes.

THE Columbia (Ala.) Cotton Mill contemplates adding several hundred new spindles.

MR. C. M. BRAXTON is endeavoring to organize a knitting-mill company at Newport News, Va.

THE Union Cotton Mills, of Lafayette, Ga., is adding 3072 spindles and eighty-four looms; Capt. A. R. Steele, president.

THE erection of a cotton mill is talked of at Saltville, Va., and Edwin E. Arnold, of Providence, R. I., is said to be interested.

THE United Industrial Co.'s new knitting mill near Weldon, N. C., is about completed and will soon commence operations.

THE Raleigh (N. C.) Hosiery Yarn Mill has declared a script dividend of \$13 50 on each \$100 share, in addition to the regular dividend of 8 per cent.

THE Dilling Cotton Mill, of King's Mountain, N. C., will double its capacity, according to a report. Mr. H. S. Chadwick, of Charlotte, N. C., is president.

MESSRS. W. A. HOLDER, Harris Brown and G. N. Guthrie have been appointed a committee to solicit stock for a new woolen mill at Gallatin, Tenn. The proposed capital is \$25,000.

THE Cherry Cotton Mills, of Florence, Ala., has declared a quarterly dividend of 3 per cent. This plant has been in operation about a year, and is now operating twenty-three hours a day.

A COMPANY has been organized at Winder, Ga., to erect a cotton mill, and subscription books are now open. Jno. S. Smith is president; W. H. Bush, A. J. Kelly and others, directors.

THE Harmony Grove (Ga.) Cotton Mill is very busy, and has been operating day and night. A semi-annual dividend of 12½ per cent. has just been declared. The company will probably put in more machinery.

THE Monroe (Ga.) Cotton Mill, noted last week as organized, will erect a 5000-spindle plant for manufacturing cloth and yarns. The company will erect a two-story building and twenty-five cottages to accommodate the operatives; Mr. B. S. Walker, president.

THE Virginia Silk Mill, at Fredericksburg, Va., shut down three days during the week to make improvements. Mr. Walter Stearn, of New York, lately leased this plant. Superintendent Keeler says that additional machinery will have to be added in the fall. The equipment is now 10,000 spindles.

THE projectors of the cotton mill at Lancaster, S. C., have elected directors as follows: Leroy Springs, of Lancaster; H. S. Chadwick, of Charlotte, N. C.; J. M. Heath, W. C. Thomas and others. The latter elected Col. Leroy Springs president, and W. C. Thomson, secretary-treasurer. Plans will be formulated for the early

commencement of work on the mill. Capital stock is \$150,000.

THE Birmingham (Ala.) Hosiery Mill Co. has been formed by E. Werblein, H. B. Herman, L. Weinstein and H. Werblin. The owners will remove a large knitting mill to Birmingham from Mobile at once. Employment will be given to nearly 100 hands. The machinery is already shipped, and the mill will be in operation by August 1.

MR. J. A. SMITH, of Bessemer City, N. C., who has purchased the Swift Creek Cotton Mill, near Petersburg, Va., writes that no move will be made toward the purchase of more machinery for several months. The plant's present equipment will be thrown out and 5000 new spindles put in. Reorganization will be effected about October next.

THE Roanoke Rapids Mill Co. has awarded contract to Wirt A. Chesterman & Co., of Richmond, Va., for the erection of its mill building. The structure is to be four stories high, 245x106 feet, and will be equipped with 12,000 spindles at the start. Water-power will operate the plant, and it is to be located near Weldon, N. C., as recently mentioned.

BRICKLAYING on the main building of the Rutherford Cotton Mills, at Rutherford, N. C., will be pushed to completion as fast as possible. A meeting of the directors was held last week. It was decided to increase the cash capital stock to \$100,000, and Mr. D. F. Morrow was elected a solicitor to canvass for stock in New York and other cities.

THE Mills Mill, proposed at Greenville, S. C., has been fully organized, and directors elected as follows: Jas. L. Orr, Hy. Briggs, J. R. Robertson, of Charleston; J. P. Charles and W. B. Moore, of Charlotte, N. C. Mr. O. P. Mills was chosen president and treasurer, with Wm. Wilkens, vice-president. Site will be selected at once and work commenced. Contract for brick has already been let.

THE Bonham Board of Trade, Bonham, Texas, in a letter to the MANUFACTURERS' RECORD says: "Our people are rapidly developing a sentiment favorable to the building of a cotton factory, but we do not know how nor where to begin to accomplish this purpose. We will appreciate it if you can aid us to get in correspondence with an experienced man who understands the management and operation of a cotton mill, who is willing to put money and time into it."

Diversifying Industrial Interests.

MR. R. H. Allen, secretary of the Young Men's Business League, Memphis, Tenn., in a letter to the MANUFACTURERS' RECORD says:

"Some time ago Mr. McDonel, of the Windsor Patent Brush Co., of Windsor, Ontario, Canada, made a visit to Memphis with a view to investigating this city as a location for his brush and broom business. In May last, his preparations being completed, he opened his factory under the name and style of the Memphis Brush & Broom Co. Its business has so far prospered that it is now preparing to add the making of brooms, having the machinery for that purpose which is now being put in place.

"The establishment of this industry here will tend to diversify the crops of this region. Broom-corn is a prolific and profitable crop, and a factory in Memphis using it in large quantities will make such a demand that farmers around this city will be induced to increase its production.

"This is the only factory south of the Ohio river making brushes. The handles and backs for the brooms and brushes are made in this city. The corn for the brooms will be grown in this section. The fibre for the brushes is imported from Mexico. So that in addition to stimulating the diversity of crops in this section it will make business for the timbermen that has not been secured heretofore, and also brings Memphis into direct relations in importations from Mexico."

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

A New Industry in Oil-Making.

The establishment of a hemp and linseed-oil mill in the South, as reported last week in the MANUFACTURERS' RECORD, opens up a new line of industry for that section. Mr. J. W. Eckford, of Aberdeen, Miss., in a letter to the MANUFACTURERS' RECORD says: "The Aberdeen Cottonseed, Linseed and Hemp Oil Mill has been organized, the building purchased and will be put in shape and machinery placed by November 1.

"The purpose of the company is to encourage the planting of hemp and flaxseed in our prairies, to purchase the crop and convert it into oil. Until we can grow material here we will buy our stock in the West. Transportation is reasonable, but in a twelvemonth we will be independent of foreign markets. As to cottonseed, we can buy all we need at satisfactory prices. We will buy the most improve machinery and secure skilled labor.

"The capital stock is \$50,000, paid in. We will add to the plant as our means and profits will permit, expecting to increase its capital stock to \$100,000 in the next four years if successful."

The Market for Cottonseed Products.

NEW YORK, July 16.

The market for cotton oil is yet in an unsettled condition, although prices have in the main been firmly maintained. Export trade is remarkably dull. Offers for United Kingdom and Continental markets shading current figures fail to interest shippers. Ample supplies of Egyptian seed at comparatively low valuations have enabled English manufacturers to place orders along the Mediterranean at prices which render competition on the part of the American producers impracticable; hence the apathy displayed by consumers in Southern Europe, rendered still more indifferent by the presence of ample oil supplies for current needs. The advance in olive-oil values in Italy and Southern France, owing to the threatened short crop, will doubtless affect cotton-oil values favorably. The peculiar conditions which at the moment govern the grain and provision trades are working to the disadvantage of cotton-oil interests, while the immediate prospect for improved compound-lard trading presents no new feature. Reports from the Rotterdam market point to unchanged prospects since date of previous report. The Dutch butterine manufacturers continue purchasing light supplies, owing to the slow demand for the substitute. Bids for good off-grade summer yellow from the English markets are of such a character as to preclude the possibility of transacting business on a remunerative basis. Local consumption in crude is of a light nature, while purchases of a material character by Western refiners are the exception. Texas prime crude is on offer at 17 cents, and in some instances at 16½ cents. Spot barrelled crude is yet a scarce commodity, while for white oil there is but little interest displayed. Exports during the week from New York, Baltimore and New Orleans aggregate 12,671 barrels, the greater portion of which being in port, consignments on old contracts. Of the foregoing, 5000 barrels were destined for the Liverpool and Marseilles markets each. Sales of off summer yellow to the extent of 1200 barrels are reported at 25¼ to 26 cents, while for September delivery 1800 barrels have been sold at 26 cents. Choice yellow to the extent of several hundred barrels have been sold for future delivery at 27 cents, and three tanks prime crude

for prompt delivery at 17 cents. Spot quotations are as follows: Prime crude, 23 to 24 cents; off crude, 21 to 22 cents; prime summer yellow, 26½ cents; off summer yellow, 25¼ to 26 cents; butter oil, 27 to 28 cents; white summer, 29 to 31 cents, and soap stock, 1½ to 1¼ cents per pound. Late dispatches from England report Hull-made, refined oil in bulk 16s. 6d. per ton, and for November delivery 17s.

Cake and meal still continue in good request at firm prices for the English and German markets. New Orleans quotations remain unchanged. English undecorticated cotton cake is quoted at £4 for the best variety, and American decorticated cake at £5 12s., the former having a very limited demand. The proportion of cottonseed crushed in Hull for the first six months of the present year is estimated at 114,773 tons, while for the same period during the preceding year 93,968 tons is the total.

Joseph T. Perkins, president of the company of that name whose extensive factories are located in Brooklyn, N. Y., died suddenly on the 12th. Mr. Perkins for many years supplied camel-hair press bagging to oil mills without a competitor, amassing a considerable fortune thereby.

Cottonseed-Oil Notes.

A CHARTER has been granted to the Farmers' Cotton Oil Co., of Ladonia, Texas, with a capital stock of \$25,000. The incorporators are J. F. McFarland, J. E. Jackson, T. H. Hockaday and others.

THE directory of the Ladonia Cotton Oil Co., of Ladonia, Texas, met on the 9th inst. and decided to double the capacity of its mill. The directors appointed a committee to report on the advisability of adding a 10 bale ginnyery.

A COMPANY has been organized at Anderson, S. C., to build another cottonseed-oil mill with a capital stock of \$25,000. A charter has been secured and work will begin at once to put up the necessary buildings, so as to be ready for business in the coming fall. The mill will be run by electricity, which will be furnished by the Anderson Light & Power Co.

AT a recent meeting of stockholders of the St. Landry Cotton Oil Co., of Opelousas, La., the following board of directors was elected to serve for the ensuing year: Messrs. Isaac Roos, E. M. Boagni, Alphonse Levy, E. B. Dubuisson, James T. Stewart, Joseph Block and Anthony Dretlien. The directors held a subsequent meeting and elected the following officers: E. M. Boagni, president; E. B. Dubuisson, vice-president; James T. Stewart, treasurer, and I. Silverberg, secretary.

THE gentlemen interested in the formation of a cotton-oil exchange in New Orleans met in that city on the 12th inst. and completed an organization. The purposes of the association will be to collect and disseminate statistics and information in regard to the trade and undertake all such matters as may tend to promote the interests of the general cotton-oil industry. The officers of the exchange are Henry Marx, president; E. Conery, vice-president, and A. C. Landry, secretary and treasurer.

It is stated that M. O. T. Bugg, who has recently been investigating as to the most advantageous points for the location of his cottonseed-delinter plants, has about decided that the first one will be set up in Savannah, Ga. His idea is to have the plants in working order in time for the coming cottonseed season, and he is now having fifty of the delinters constructed by the Van Winkle Machine Works in Atlanta. After the location of a plant at Savannah others will be established at Charleston, S. C., and Brunswick, Ga. Mr. Bugg expects to have these three plants ready for work by October.

PHOSPHATES.

The Florida Rock-Phosphate Deposits.

[A paper read at the Florida meeting of the American Institute of Mining Engineers by G. M. Wells, Ocala, Florida.]

A view of the map of Florida shows the phosphate deposits to lie on the western side of the State, extending southward over an area about 200 miles long by twenty miles wide. In the different portions of this area the phosphates vary somewhat in character of formation and in quality, and there are intervals containing several mines between the general groups of deposits. The mining field of each of these general groups is made up of small deposits or pockets covering from one-eighth of an acre or less to three-quarters or one acre, with occasional pockets broken by narrow "skips," covering two to four acres. A few larger tracts of continuous deposits have been discovered, but generally these superficially larger deposits are found not to extend to as great a depth as the smaller ones, and in most cases the material is of lower grade and lies imbedded in an irregular formation of lime, which is an obstacle to systematic and profitable mining.

The hard-rock phosphate territory is distributed about as follows:

The Luraville tract is an apparently separated or isolated territory, a few miles northwest of the general trend of the phosphate field, with its western margin marked by the Suwanee river. The extent of this tract is not at present determined.

Outside of present mining work little prospecting or examination has been carried on in it, but superficial evidences, such as are considered important and favorable at other points in the phosphate region, indicate that very large quantities of material can be produced from lands in this locality, covering an extent of three or four miles square, and that the grade will be well above the established standard of commercial requirements. The formation presents a massive exposure of mixed boulder and gravel phosphate wherever development and exploitation have been made. The only mining operations now conducted in this district are those of a company of French investors, which has the largest plant engaged in phosphate-mining in this State, and when its plans for operating are fully matured, will probably be the most extensive producer in the whole phosphate territory. Eight double log-washers, with their supplement of mining appliances and drying and screening apparatus and all that goes to make up a complete mining enterprise, comprise the equipment of this model and progressive French establishment.

The High Spring and Trenton section, which occupies the northern workable limit of the field of operations, embraces about eighteen mining plants, and is estimated to produce 400 tons per day. The peculiar feature of this section is the occurrence of large pinnacles or upright boulders of limestone, which, in many cases, extend to the surface and appear as outcrops. The phosphate deposit, which lies intimately connected with these "lime points," and is imbedded between and around them, has constantly yielded a large and profitable amount of good marketable material, easy to excavate and economically handled; and this field is considered a favorable one for operating; in fact, a number of its mines are prominently known as among the best producers in the State. In one case known to the writer eighty to 100 tons per day is taken out and prepared for shipment at the present time by a plant of only ordinary capacity, and with facilities that might be much improved. A new French syndicate is now being organized that will operate on a large scale in phosphate lands near Newberry, in the High Spring section, which

have been reserved from sale until the present time, and are known to be of great value. The Trenton addition, with its very extensive and valuable beds of "plate rock" phosphate, will also be operated by the syndicate mentioned.

Next comes the Albion district with a smaller area, but a good product of uniform grade. About ten mining plants are operating in this section with an average total product of about 300 tons per day. Mining is here conducted with special difficulty, as water is reached about twenty five feet from the surface of the ground. Pumping and dredging appliances are now being introduced with advantage and are likely to be generally adopted in this vicinity, certainly after a depth of more than twenty or twenty-five feet has been reached. Dredges of the ordinary bucket pattern are constructed at the margin of the mines and launched into the water when sufficient depth has been attained to float them, the processes that follow being the same as

mines here have been constantly producing phosphates of the best grade since the discovery of these valuable deposits. The mines at Dunnellon are worked on a more extensive scale than any of the other mining properties in the State, their product and methods of mining have given a character and impetus to this special industry, and the name of this district has carried with it a guaranty of value and has been an important factor in promoting the phosphate business in this State. At these mines and in the immediate vicinity there are mined and prepared for shipment about 350 tons per day of phosphates of high commercial value. The machinery, appliances and devices for handling material used in this district are of the most modern type, and the system of labor is generally conceded to be unexcelled.

The Citrus county phosphate field is a district about forty miles in length and varying in width from one to five miles, with a large number of separate deposits of

school of experience. Failures here have given rise to the knowledge of better methods and the introduction of improved appliances in other places. The Anthony field, under more favorable auspices, is still likely to be an important factor in the Florida phosphate production.

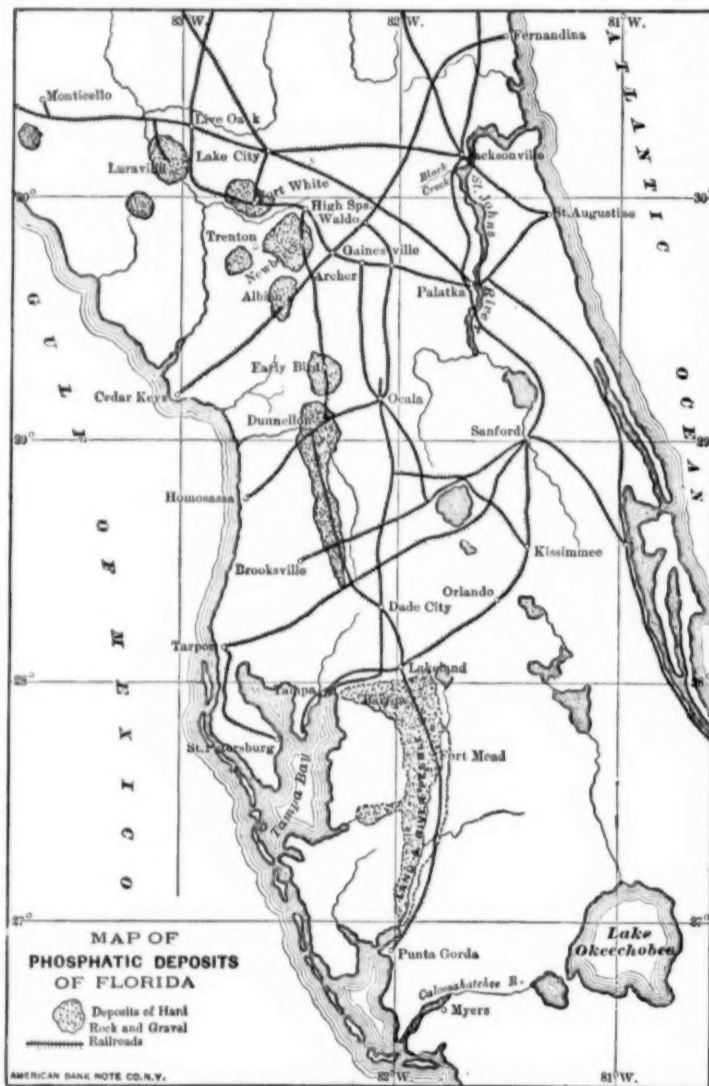
The whole of the territory thus sketched and indicated on the phosphate maps of the State is included in the high-grade hard-rock district, and has produced, since the discovery of phosphate in 1890, about 900,000 tons of marketable material, analyzing from 76 to 82 per cent. of bone phosphate of lime. The present production in this hard-rock field is about 1,400 tons per day. About seventy mining plants (some of very small capacity) have been erected in this territory. Probably fifty of these plants are at present in full operation, while the others are in process of remodeling to comply with newer methods or are being placed in better positions for successful work.

There is much difference in the net yield of good material in the several mining fields mentioned. A fair output for a plant consisting of a double log-washer, with boiler, engine, pumps, screening machines, dryers, etc., is thirty to forty tons of cleaned and dried product per day. The apparent discrepancy between the output of mines as stated above in connection with the different sections, and the estimated product of about 300,000 tons for the present year from the whole hard-rock field, is accounted for by the voluntary suspension of work at some mines by reason of changes of machinery, repairs and other conditions common to all mining enterprises, and no doubt familiar to those members of the Institute who are engaged in active mining.

The cost of mining depends upon the amount of overburden or superficial earth to be removed before reaching the phosphate, and the percentage of good material contained in the bulk of the material that is carried to the washer. Some of the deposits begin as outcrops, but the greater portion of the phosphate is taken out beneath from six to fifteen feet of overburden, partly sand and partly a clayey loam, and in many instances a stiff tenacious clay, in which case the labor and expense are greatly increased. The average depth from the surface to which the deposits extend is about fifty feet, the last few feet being generally worked below the natural water-level of the phosphate field. All mining is done in open cuts.

The present price of phosphate is but little more than one-half what it was at the beginning of the business in 1890 and 1891, but the production is steadily increasing, and the cost of production has been so much reduced by the use of modern machinery, by a better knowledge of mining methods and by an enforced economy in expenditure that even at the present low prices obtainable for phosphates the business is fairly remunerative. With a better condition attending general business throughout this country and abroad mining operations in Florida may be expected to improve and become again a very profitable industry.

There is no phosphate region in the world known today that possesses so many advantages for successful mining as that of the Florida deposits. The grade of the material shows the highest average that is produced anywhere. The facilities for moving the material to points for distribution are good. The average distance from mines to ports of shipment is about 150 miles. The distributing ports for the hard-rock districts are Port Tampa, Fernandina, Brunswick and Savannah, the largest tonnage being moved from Fernandina, where storage bins are located and loading facilities are good. Port Tampa, the terminus of the Plant system of railroads, is constantly adding facilities for the prompt handling of cargoes of phosphate, and at



those employed in dry mines in other localities.

South of this field is what is known as the Early Bird section, covering a large area. Here the beds of phosphate are found very commonly intervening between bodies of sandstone and of boulders of flint, and lying upon a bed of limestone, the phosphate deposits being located in the basins or indentures between these flint tracts. Here most of the phosphate material is imbedded in clay and presents difficulty in the preparation of a clean material. This is now being overcome by a more thorough mechanical handling; and the production of high grade phosphate in this section is about 250 tons per day, five or six plants being at work, and others in process of construction.

The next is the Dunnellon district, which, with the Piedmont, Alachua, Stone-wall, Marion and Tiger additions, is the original centre of the hard-rock mining region. The first mining of hard rock in Florida was begun at this point, and the

phosphate, nearly all of which extend to more than the average depth of the material as generally found elsewhere. It presents largely a boulder formation of very high grade which can be taken out and handled at moderate expense for cleaning and preparation for market. The boulder formation generally lies in a so called gravel phosphate matrix or covering, and the yield of good material from these deposits when the matrix is manipulated by mechanical appliances shows probably the largest percentage of the bulk of crude product mined that is obtained in the State.

The Anthony deposits, in Marion county, near Ocala, were considered at the very beginning of the phosphate discoveries an important workable field of operations, and a number of plants of varying and peculiar construction were started in this territory. Unfavorable conditions, however, prevailed in this section and some operators failed in their mining enterprises. The district may be looked upon as the experimental field or

present nearly equals Fernandina in the amount of its shipments. Railroads are numerous, and can be cheaply constructed when necessary to extend them into new sections. The machinery needed to mine and prepare the material is simple and inexpensive compared with that generally used in other mining operations, and the cost of a plant with sufficient land to work upon is within the reach of small investors. The working days at the mines are about 280 during the year. The climate is healthful, labor is readily obtained at a fair compensation, and skilled operatives are at hand who are becoming familiar with the business. The mining camps are generally well regulated, and proprietors and employees can reside at the mines with safety and with little inconvenience, as supplies of all kinds can be readily obtained at the towns located in the near vicinity of all the large mining fields. Telegraph and mail facilities are within easy access of nearly every mining camp in the State.

The mine operators are mostly persons who have been drawn from other vocations, but are men of high character, are persevering and energetic, have profited by hard earned experience and have become generally proficient in their new employment and successful in adapting means to ends, as is shown by the rapid and still-increasing growth of the industry.

Florida phosphates are mostly shipped to European ports, and are manufactured into fertilizers in England, Ireland, Germany and France. Quite recently shipments have been made to the Sandwich Islands. Foreign agents of consumers and dealers in phosphates have their offices near the centres of production, and contracts for delivery and prices are commonly made at points of shipment, the material being sold at a given price per unit of its contents of phosphate of lime. The Florida phosphates are all used in the manufacture of commercial fertilizers and super-phosphate.

There has been much speculation as to the extent of the phosphate deposits of Florida. Government officials and others have made investigations and reports on the subject, with widely-varying conclusions. As new lands are being developed and worked our knowledge becomes somewhat enlarged, and it might now be within reasonable limits to say that the hard-rock phosphate regions of Florida embrace about 500,000 acres, and that there may be 500 acres of actual phosphate deposits which could be estimated to yield 20,000 tons per acre, making about 10,000,000 tons of hard-rock phosphate as a possible amount that may be reckoned as available for future supply. There is a steady and constantly-increasing interest in this industry. New mining plants are still being erected in all parts of the phosphate region, and the capital which is invested in this business, now amounting to more than \$10,000,000, will probably be very considerably augmented in the near future.

Ocala, in Marion county, a town that contained in 1868 a population of 200 or 300, has become a thriving and prosperous city with modern improvements and conveniences, and is the centre of the hard-rock phosphate industry, with good banking and other financial facilities. Railroad connections and transportation arrangements are complete and suited to the increased volume of business resulting from the phosphate developments, and the place is well adapted in every way for the homes and offices of investors and operators employed in such enterprise.

No reference has been made in the above statement to the land and river pebble phosphates of the more southern part of the phosphate belt, which are called the "South Florida pebble deposits," and are composed of a drift formation of small pebbles from the size of grains of wheat to that of a walnut. These deposits lie

nearer the surface than the hard rock phosphate, and are of variable depth and thickness, covering larger continuous areas than those of the hard-rock regions. The percentage of bone phosphate of lime is less than that contained in the rock of the territory above referred to, being an average of about 60 to 65 per cent.

The mining work is mostly done by hydraulic processes, pumping plants being so arranged as to wash down the mass of pebble and matrix and lift the whole to elevated washers and screens for separation and cleaning, after which it is returned to revolving cylindrical dryers, and from these to storehouses, ready for shipment. Powerful dredging machines are also used in mining operations in the South Florida deposits, both in the land and river mining, and the machinery used is generally much more complicated and expensive than that in the hard-rock phosphate section.

About 600,000 tons have been mined and shipped to American and foreign ports from the "pebble" district since the beginning of mining there. Port Tampa, on Tampa bay, and Punta Gorda, at Charlotte Harbor, are the principal shipping points for the pebble phosphates. There are fifteen plants engaged in the production of this material, and railroad and water facilities are good and convenient for handling the product. The undeveloped area of phosphate lands in this section is large, and a continuance of the amount at present produced may be expected for several years if conditions of demand and prices are favorable.

Phosphate Markets.

OFFICE MANUFACTURERS' RECORD, BALTIMORE, July 18.

The local phosphate market is quiet, with no urgent demand at the moment. Manufacturers are making small purchases, and the demand from out-of-town buyers is light. The reports from mining sections in South Carolina and Florida represent the market as quiet, with the domestic and foreign demand only moderate. The late advance in freights has restricted business, and domestic trade is consequently light. The only arrival reported during the past week was the schooner Lydia M. Deering from Tampa with 1728 tons of phosphate. The business in charters has been limited in the local market, and none are reported for the week. The market for freights in New York closes dull and featureless, with rates more or less nominal. The charters reported are as follows: A schooner, 535 tons, from Philadelphia to Port Royal with coal at 65 cents, and back to Baltimore with phosphate rock at \$1.80, and a British steamer, 1415 tons, from Tampa to Flume with phosphate at 15/6, July, chartered abroad. The market for phosphate rock closed steady, with quotations as follows: South Carolina, \$3 to \$3.25 for crude, \$3.50 to \$3.75 for hot air-dried, and \$6.50 for ground rock, all f. o. b. Charleston. Florida rock is quoted firm at 8 1/2 to 9 cents per unit for 70 per cent. land pebble delivered at Eastern markets.

FERTILIZER INGREDIENTS.

The volume of trade is light, and the market during the past week has been dull. Quotations are unchanged, and business is at a standstill since the advance in freights from the West. Nitrate of soda is quiet and steady.

The following table represents the prices current at this date:

Sulphate of ammonia, gas.....	\$2 75@ \$ —
Sulphate of ammonia, bone.....	2 65@ —
Nitrate of soda.....	1 75@ —
Hoof meal.....	1 80@ —
Blood (beef).....	1 85@ —
Azotine (beef).....	1 75@ —
Azotine (pork).....	1 75@ —
Tankage (concentrated).....	1 65@ —
Tankage (9 and 20).....	1 65 and 10
Tankage (7 and 30).....	15 50@ 16 00
Fish (dry).....	21 00@ —
Fish (acid).....	15 00@ —

CHARLESTON, S. C., July 15.

The phosphate market during the past

week was rather quiet, shipments being rather lighter and manufacturers holding off. The coastwise freight rates having advanced, delays shipments somewhat. Several interior factories are in the market for large amounts of rock. The river companies are active, and report a good business. The prices are \$3 crude, \$3.50 hot-air-dried, \$6.50 ground rock, all f. o. b. Charleston. The coastwise shipments were: The Josephine, 1000 tons for Baltimore; James Baird, 600 tons for Philadelphia; S. B. Marts, 700 tons for Baltimore. In port and loading are the Fannie Brown and L. V. Beebe. The water shipments since September 1 were 87,939 tons crude and 1450 ground rock, against 113,742 tons crude and 4837 tons ground rock for same date last year.

Phosphate and Fertilizer Notes.

THE Land Pebble Phosphate Co., in Polk county, Fla., keeps its plant in full operation day and night, and the output is large.

THE British steamship Sutherland sailed from Savannah last week for Rotterdam with 3000 tons of phosphate rock valued at \$30,000.

ALL the phosphate mines in the Early Bird district of Marion county, Fla., have closed down for the present until better prices prevail.

THE steamship Ferndene cleared from Port Tampa last Wednesday with 3304 tons of phosphate from the Land Pebble Company for Helsingborg.

THE Palmetto Phosphate Co., near Bartow, Fla., has just completed the installation of a second Merrill & Stevens dryer, by which the product will be dried as rapidly as it is mined.

MR. JOHN G. MCGIFFIN, the most prominent phosphate forwarder in Florida, was married last week at Fernandina to Miss Virginia Taylor, of that place, the marriage being a social event.

THE Agricultural Department of North Carolina reports that after a careful examination it finds that 49 per cent. of the commercial fertilizers sold in North Carolina are manufactured in that State, and that 25 per cent. are manufactured in Virginia and South Carolina.

A LARGE meeting of hard-rock phosphate miners was held in Ocala, Fla., on the 16th inst. for the purpose of agreeing on a basis of organization. An agreement was reached, and there was an election of officers, who will serve for three months, when a permanent organization will be established.

THE North Carolina Board of Agriculture at a recent meeting provided against the further abuse of fertilizer tags. Hereafter the department will print on the reverse side of the tag the name of the manufacturer, and which will also state "sold for the exclusive use of" the particular firm who purchases.

THE application for letters-patent for the new organization to be known as Campagne General des Phosphates de la Floride is now duly appearing in the Ocala press, and the company will shortly receive charter privileges from the State. The company will operate in Marion, Levy and Alachua counties, with its head office at Ocala.

A MEETING of quite a number of phosphate miners was held at Gainesville, Fla., last week for the purpose of effecting an organization for the mutual protection of themselves. No officers were elected, but arrangements were made for another meeting to take place on the 16th of July at Ocala. The new organization is to be known as the Florida Miners' Association.

SIX of the mines near Osceola, in Alachua county, have recently shut down for the summer. The demand for rock

just at present is light, and the expense of mining at this season of the year is always increased by the loss of time enforced by the almost daily heavy rainfall. Rather than carry expensive stocks until the opening of the fall season, many miners close down temporarily.

THE coastwise shipments of phosphate rock from the port of Charleston, S. C., for the week ending July 12 were as follows: Schooner Josephine for Baltimore with 1000 tons and steamship Laurada with 1150 tons acid phosphate; schooner James Baird for Philadelphia with 570 tons, and steamer Seminole for New York with 120 tons. The total shipments from September 1 amount to 84,449 tons coastwise and 3490 tons foreign, making a total of 87,939 tons, against 113,742 tons for the corresponding period last year.

The Southern Movement.

[The Charlotte News.]

Not many of our people realize the importance of the movement of men and industries to the South. It commenced quietly, and though it has grown into tremendous proportions, reaching every section of this country, as yet many of our own people do not realize the magnitude of the movement.

It is no popular tide that changes with the moon that is turning in this direction. It is a steady flow, as of a mighty river, of men, money and enterprise. It has been brought about by a discovery of our unsurpassed resources.

This wave of development will not pass over or recede until the South becomes the richest country the sun shines on. This is our unwavering belief. We rejoice that it is so, and we urge our young men especially to grasp the situation and prepare to reap a share of the benefits.

In speaking of this movement the MANUFACTURERS' RECORD says:

"Every thoughtful man must see that the Southern movement of men and money is assuming proportions that few would have been bold enough to predict five years ago. The opportunities offered by the South to the capitalist, to the manufacturer or miner and to the farmers are so far beyond what can be found elsewhere that these people are coming South in ever-increasing numbers. We could not stop this movement if we would. The tide has turned our way. The destiny of the South as a country is already beyond our control. The destiny of its people and their place in this new order of things is in the hands of the men and women of today. It behooves the people of the South to give to the rising generation the best possible business and technical training and education if they are to hold their rightful position in the great work of advancement. The man of money is coming South to build cotton mills, railroads, furnaces, steel works and every other enterprise that can utilize our raw materials. Shall the skilled labor needed, the trained brain and muscle, be of the rising generation of Southern boys, or shall these be the 'hewers of wood and drawers of water' for the money and the skill from other sections? The South must face this question and give answer to it at once."

We would like to burn these words into the minds of the young men of the South. This is a golden opportunity. May they reap a rich harvest.

ACCORDING to reports compiled by the Spanish-American Industrial Journal, of San Antonio, Mexico has about 6300 miles of railroad now completed, operated by thirty companies. Much of this mileage has been built by English and American capital.

W. W. ANSLEY has been appointed general roadmaster of the Plant system.

MECHANICAL.

Electricity in Industrial Plants.

The advent of electricity into the machine shop is creating a revolution in many branches of industry. Great progress has been made in the development of the electric motor and methods of equipment to meet the changing and severe requirements imposed in this employment. An example of what has been accomplished is shown in the new works at East Pittsburg, Pa., of the Westinghouse Electric & Manufacturing Co. The installation made is properly considered the most important thus far attempted, and its practical success will serve to remove doubts entertained by conservative managers of industrial plants who, already half convinced of the manifold advantages of electrically-driven machinery, await the cold, unbiased facts that a thorough test would develop before being thoroughly satisfied. A recent article pub-

in phase were employed, was the alternating current adapted to the demands of commercial power practice."

The Westinghouse Electric & Manufacturing Co. has for years been recommending the system to their patrons as universally applicable for general power distribution, and give evidence of their faith in the system by equipping their own works with it.

For several reasons this plant forms the most interesting installation of polyphase apparatus thus far made. In the first place, says Mr. Perry, "the same type of apparatus, the same method of distribution and the same frequency of alternating current (3000 per minute) are employed as are to be used at Niagara. Its sufficiency for all the multifarious demands of these large works is therefore a demonstration of its sufficiency for all the demands that can be made upon it at Niagara. Furthermore, it is the first practical demonstration of this on a sufficiently extended scale to settle

each, driving forty tools of various kinds in tool department; one forty horse-power, driving about forty tools of various sizes in commutator department; one twenty horse-power, driving about twenty-five or thirty tools in brush-holder department; one thirty horse-power, driving about sixty tools in controller department; one twenty horse-power, driving about fifteen tools in converter department; one twenty horse-power, driving fifteen punches and various tools in mica department; four twenty horse-power, driving 200 winding lathes; six forty horse-power, driving fans for heating—making twenty motors of an aggregate of 620 horse-power already installed in this building.

There still remains to be installed in this building the following motors: One thirty horse-power, to drive three Ingersoll milling machines; two thirty horse power in railway motor armature department, each of which will drive some forty tools, lathes, etc.; one fifteen horse-power in motor armature winding department; two

for heating purposes—making eight motors of 220 horse-power.

Carpenter and cabinet shop 192x60 feet.—100 horse power in small units; all direct current at present, but to be replaced with two phase motors.

Blacksmith shop 242x82.6 feet.—Two twenty horse-power on exhaust fans; two ten horse-power on pressure fans; one twenty horse-power, driving two large shears and punches and five smaller tools—total, five motors of eighty horse-power.

Power-house 206x76 feet.—At present this contains two 500 horse-power direct connected alternating current (two phase), and two 500 horse-power direct-connected direct-current machines. The full complement will be three units of 500 horse-power each of each kind.

Punch shop 258x76 feet.—Two eighty horse-power each, driving forty-odd punching machines

Recapitulating, we find that there are at present installed and in operation thirty.

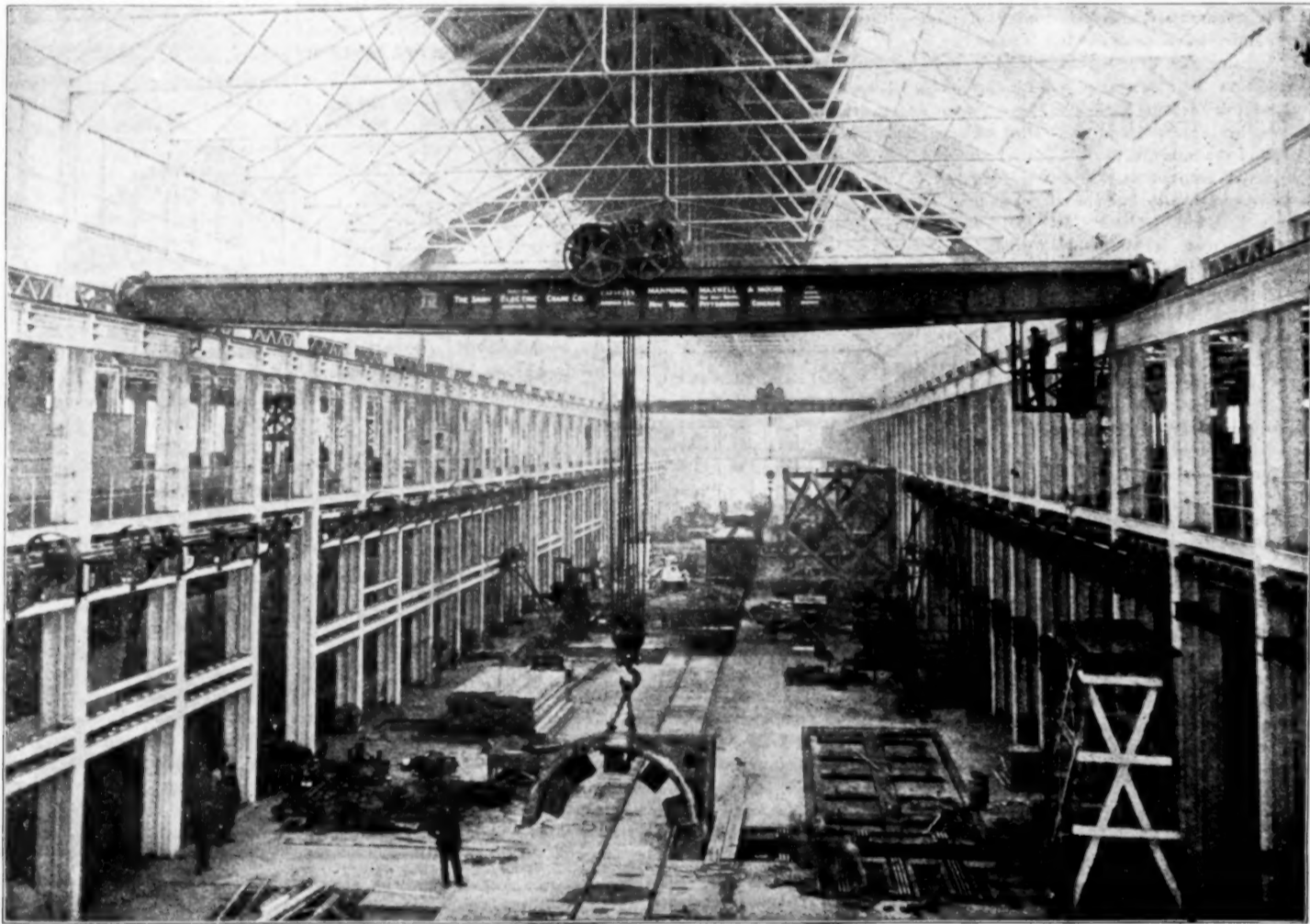


FIG. 1.

lished by Electricity gives an extended review of what has been and is being done at East Pittsburg. Nelson W. Perry, E. M., the writer, presents a comprehensive study of the installation made there. In referring to the application of electricity to power uses of this class he makes the following claims:

"Early in the history of the art alternating-current motors of good efficiency had been constructed, which, when once brought up to speed, would do good work, but from that day to this, notwithstanding the persistent efforts of the best talent, a simple alternating-current motor that could be started and stopped and reversed while under load, and thus fulfil all the requirements of commercial practice, has not been built.

"From time to time claims have been made that this has been accomplished, but the test has never verified the promise. Not until the invention of the polyphase motor by Nikola Tesla, in which two or more simple alternating currents differing

the matter beyond question. In the second place, it is the first demonstration on a practical scale of the system to machinery and work of the greatest heterogeneity and severity of exactions, and as a forerunner of the Niagara project will serve as an object-lesson of the greatest value and do more to rapidly advance the great industrial progress in and around Niagara, which has to depend upon this very system, than almost any other agency."

With such an authoritative estimate of the importance of this installation, it will be of special interest to know the extent and character of the machinery to be driven. A complete list is as follows:

Main machinery building 754 feet long by 235 feet wide. Small generator department—machines below 100 horse-power.—Ground Floor: Two forty horse-power motors each, driving planers, drill presses, lathes, etc., to the number of about 100 machines. Galleries: One thirty horse-power, driving about forty screw machines of various sizes; two thirty horse-power

thirty horse-power in motor machinery department, each driving some thirty heavy tools, boring mills, lathes, drills, etc.; one thirty horse-power, to drive three boring mills, one 122x35-inch lathe, two 72-inch radial drills, two large planers; one thirty horse-power, to operate planers, boring mills and drill presses; three twenty horse-power, to drive large planers, boring mills, drill press and lathes; two 500 horse-power in general testing-room; one seventy-five horse-power, one sixty horse-power, one forty horse-power in the detail testing-room.

Some of this machinery, together with the elevator and traveling cranes, is already installed and being temporarily driven by direct current apparatus, but it is intended to supplant all these by two-phase apparatus.

Warehouse 76x754 feet.—Motors already installed: Four twenty horse-power each, driving some forty tools; two thirty horse-power each, driving some forty-five tools; two forty horse-power each, driving fans

seven alternating-current motors of an aggregate capacity of 980 horse-power. There are yet to be installed sixteen more of a capacity of 1390 horse-power, besides several hundred horse-power direct-current motors now installed to be replaced by two-phase alternate-current motors.

It will be seen from the foregoing that the new plant constitutes the largest installation of polyphase motors that has heretofore ever been attempted, and that these motors are doing almost every conceivable class of service except electrolytic work. In addition to this, all of the lights, both arc and incandescent, for the whole establishment are supplied from the alternating-current circuits, thus realizing on a most extended practical scale all the promises held out by the attractive "transmission of power" exhibit by this company at the World's Fair, and constituting this by far the most interesting plant anywhere in operation at the present time.

In an editorial reference to these works Electricity says: "Those who are contem-

plating the erection of factories at Niagara have questioned the ability of this system to adapt itself to all the varied requirements of their demands. The Westing-

house of the black rubber shell is shown the basket or runway of aluminum or metal. The sphere shown in the cut may be of carbon or other material, which normally

tact, and an intermittent or pulsatory current is produced instead of the usually employed undulating or vibratory current. This M. & B. principle is set forth in the

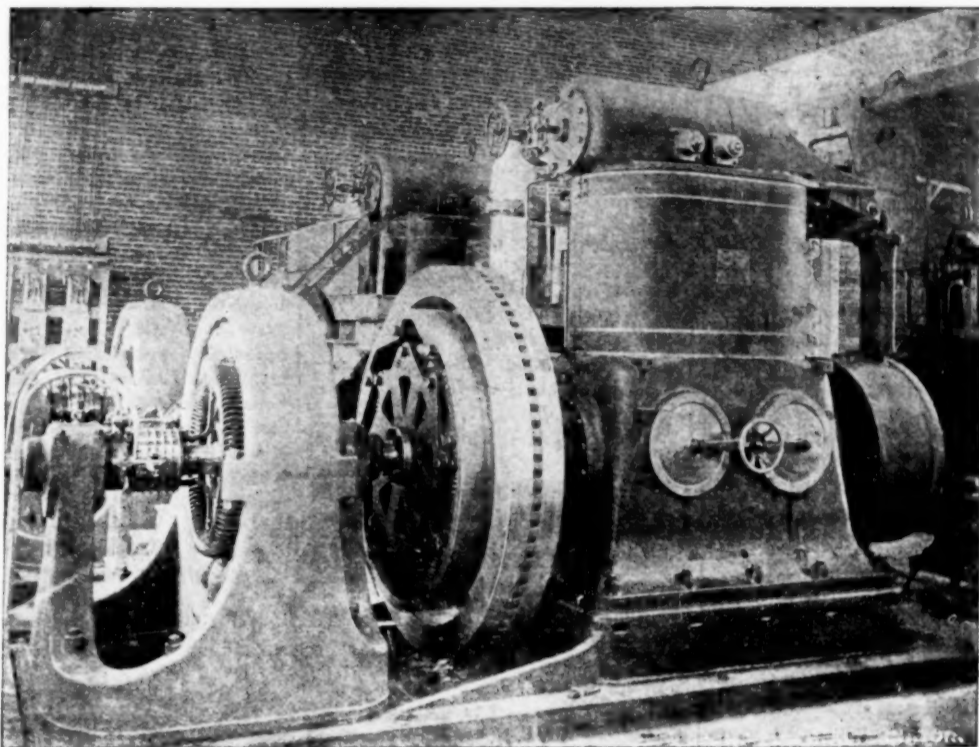


FIG. 2.

house plant answers these questions in a most positive manner, for with the single exception of electrolytic work almost every conceivable class of work is already being done successfully without the rectification of the current, and with this rectification, which is also exemplified in these same works, even electrolytic work is rendered entirely feasible. At East Pittsburg the generators are of the same general type as those at Niagara, viz, they produce two-phase alternating currents of exactly the same frequency as do the latter. The Westinghouse shops might therefore be hitched directly on to the Niagara circuit and continue in operation as now without the change of a pulley, a motor or a tool. They will therefore serve as a most important object-lesson not only to those contemplating removal to Niagara, but to other users of power having two-phased currents at their disposal. Aside from all this, these new works undoubtedly constitute the most complete electrical shops in the world of any kind, and the only ones using the two-phase current for all operations."

The accompanying cuts show the central aisle of the machine shop with a 30-ton electric crane in Fig. 1, and the 500 horsepower two-phase generator in Fig. 2.

The M. & B. Transmitter.

In the perfection of telephone service much ingenuity has of late been displayed, and some marvellously simple but all-important devices have been introduced. A notable example in this direction to which the attention of the electrical world has been directed, as well as the practical every-day user of the telephone, is the M. & B. transmitter. Unique in conception, reliable in service and simple in construction, it is rapidly becoming a general favorite. In the accompanying cut the transmitter is shown dismantled.

A description of the construction of this transmitter, which is different from all others, will be of value to the rapidly-enlarging circle financially interested in improved telephone service in the South. The details are as follows:

The diaphragm is of India mica, a highly resonant material which gives great efficiency. Attached to the centre of this diaphragm is a small aluminum cup holding a carbon or other suitable point. In front

lays in the basket or runway, which is so constructed that no matter which side of the transmitter is up, the sphere rests on a plane that is always inclined towards the diaphragm. When these parts are assem-

bled the point on the diaphragm comes about on a level with the centre of the sphere, which, owing to the angle of the side of the basket or runway, is kept against this point by gravity. With every oscilla-

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THE M. & B. TRANSMITTER.

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be better and more perfect. Every syllable, whether a shout or a whisper, is transmitted clearly and distinctly. There is no running together of words nor confusion of sounds. Second—Volume. While the volume of sound is great, yet there is no sputtering, snapping or "frying" sound. Third—Long-distance transmission. Every M. & B. transmitter is a long-distance instrument. Fourth—Simplicity of construction. There is nothing to get out of order, no adjustments to be made, no springs to give out, no "packing" and no plastic material to change in density. In fact, it is claimed the M. & B. can never get out of order or wear out. This means a great saving to exchange managers. To private users it means still more, as they often have no one who could adjust or patch up their telephone when they get in "trouble."

These transmitters are covered by over ten construction patents, with others pending, besides the broad method patent mentioned before and issued April 12, 1895, so that users of these instruments are assured that no annoyance is possible from suits on patent questions.

The United States Telephone Construction Co., of Philadelphia, Pa., which controls the M. & B. transmitters and installs complete exchanges and private lines under its patents, will furnish any further information regarding this system that may be desired.

Successful Kiln for Drying Cypress Shingles.

The accompanying illustration represents the H. B. Short plant for the manufacture of shingles at Lake Waccamaw, N. C., one of the oldest and best known plants in the South, and is devoted exclusively to the manufacture of high-grade heart-cypress shingles, known as the "Waccamaw" brand, which, owing to the care exercised in their manufacture, have established a reputation in the market as a standard.

These shingles are dried in the new automatic compression dry-kiln patented and manufactured by V. L. Emerson & Co., of 210 East Lexington street, Baltimore, Md., by their new moist-air process.

By this process the material is dried in a very moist atmosphere, and the outer surfaces are kept moist until the interior parts of the material is heated sufficient to give off the moisture which it contains in the shape of steam, and by this means the unequal expansion in the material is avoided and the material is dried uniform without injury.



THE H. B. SHORT SHINGLE MANUFACTORY.

tion of the diaphragm a movement of this sphere takes place which breaks the battery current; hence the name "Make and Break" and the well-known sign "M. & B."

The electrodes are not in constant con-

denced by the duly guaranteed claims made for it by the manufacturer. These claims, which have stood the critical test of experience, are as follows:

First—Articulation, which is claimed to

It is said by Mr. Short that shingles dried by this process are not checked, warped or hardened, and that they come from the kiln in a perfect condition for roofing.

Throughout the saw-mill section of Southeastern Texas there has been a decided improvement in the general lumber and timber market during the past week. The late inclement weather has retarded operations in many sections, but at present there is every indication of favorable weather. In the general list of values there is more firmness, and from the present active demand, which is larger than for some time past, there is every prospect of a further advance in the near future. The Journal, in its review of the lumber market, says: "Quite a decided improvement has taken place within the past week in the demand for good stock, and it begins to look as if the trade will open in earnest in a short while. The rains have ceased for a time, and outdoor workers can now resume their labors, and as everything in

the nature of improvement has been delayed on account of the continued inclement weather, it is but reasonable to expect that work will now be hastened. Within the past week volunteer orders have been received in larger number than for six months past." The situation among the mills is unchanged, and nearly all are operating according to their respective capacity. Machinery for the Long Manufacturing Co.'s new mill has begun to arrive. Altogether five carloads of machinery have been ordered, and will arrive as the pieces can be placed. On the East Texas road substantial improvements are going on in nearly all the mills. The Warren Lumber Co. now has an almost perfect plant, the mill having been thoroughly overhauled. At Hyatt the Messrs. Rice have added an artificial ice machine to their saw-mill plant, and are now supplying the people of that vicinity. There has been quite a rise in the Neches river, and considerable cypress has been gotten out. Mr. John E. Perkins, a large operator, succeeded in bringing out about 1800 logs out of 3000 which started up in San Augustine county. The Hon. F. L. Johnson, of Shelby county, purchased the entire lot as it arrived, and it is said will likely ship it to Johann Faber, the pencil maker, in Germany. Charters for two lumber companies were filed with the secretary of state last week, one the Lone Star Lumber Co., of Texarkana, and the other the Hubbard City Lumber Co., of Hubbard City, each with a capital stock of \$10,000. The sales of the Beaumont Lumber Co. from January 1, 1895, to July 1 amounted to 13,517,436 feet of lumber, and of the Nona Mills Co. for the same period 7,747,895 feet, making a total of 21,265,331 feet for the two companies.

Lumber Notes.

THE lumber for the Alabama building at the Atlanta Exposition has been donated by the Wagar Lumber Co., of Mobile, Ala.

THE Parmalee-Eccleston Lumber Co., of Onslow county, N. C., is at present filling some large orders for lumber for shipment to England.

THE Whitecastle Lumber & Shingle Co.'s new sash and door warehouses, etc., at Whitecastle, La., are being completed and will be a valuable addition to the company's extensive plant.

DURING eight and a-half months of working time Messrs. R. C. Luce & Son, of Basin, Miss., have cut and hauled over their road to Plum Bluff 56,333 saw logs, containing 10,800,000 feet of lumber.

It is stated that the Mackie Lumber Co., of Piedmont, W. Va., has purchased all the manufactured oak lumber, embracing about 300,000 feet, from the Manor Miner Manufacturing Co., located at Schell, W. Va.

THE sales of lumber by the Beaumont Lumber Co. from January 1, 1895, to July 1 amounted to 13,517,436 feet. The Nona Mills sold during the same period 7,747,895 feet, making a total of 21,265,331 feet.

MR. WILLIAM T. SPENCER, of Jasper, Fla., contemplates building a saw mill when a suitable location can be obtained. It is probable that he may select a point near the village of McAlpin in Hamilton county, Fla.

THE exports of lumber by the Consolidated Export Lumber Co., of Beaumont, Texas, through Sabine Pass for the year ending June 30 were 11,726,111 feet, of which 6,403,652 was foreign and 5,322,459 domestic. The value of the total exports was \$118,585.

MR. W. C. WHITE, of Cumberland, Md., has purchased of Messrs. J. S. Jamesson, E. J. Fredlock and the Kahbaugh heirs, of Westernport, 1030 acres of timber land lying along the West Virginia Central

Railroad near Shaw, W. Va. This is said to be one of the finest tracts of oak timber along the line of this road.

MR. GEORGE CROFT, a prominent business man of Cincinnati, Ohio, was in Chattanooga last week for the purpose of establishing a wagon factory. The plans have not yet fully developed, but the matter is now in the hands of the business organization in that city and will be in shape soon for announcement.

DR. L. D. LUSK, who purchased the plant of the woodenware works at Wyeth City, Ala., on the 1st inst., sold out on the 8th inst. to the Fort Payne Basket Co. Messrs. Saunders & Folsom will make improvements, repairs and additions to the plant, and will increase the works to double their former capacity. The works will start up about August 1.

A CHARTER has been issued to Preston L. Bridgers, of Wilmington, N. C.; Daniel T. McKirthan, of Lucknow, S. C., and Jas. T. Barron, of Columbia, as incorporators of the Bridgers & McKirthan Lumber Co. The principal place of business will be in Sumter county, S. C., near Lucknow. The capital stock of the company is \$5000, with the privilege of increasing to \$50,000.

AMONG the clearances of lumber cargoes from Brunswick, Ga., last week were the following: S. G. Hart with 450,000 feet for New York from the Hilton-Dodge Lumber Co.; Lulu E. Wilbur, 53,000 feet and 15,000 shingles for Brava from R. Torras; Frank W. Howe with 483,000 feet and Thelma with 455,000 feet for Boston from Stilwell, Millen & Co.; Francis C. Varnell with 250,000 feet for Union Island from the Hilton-Dodge Lumber Co.

THE timber and lumber exports from the port of Mobile for the month of June were distributed as follows: Sawn timber, Portugal, 173,000 superficial feet; England, 795,000, and Egypt, 1,025,000, valued at \$8316. Lumber, United Kingdom and Continent, 33,000 feet; Egypt, 361,000 feet; West Indies, 573,000 feet; Mexico, 626,000 feet; Central America, 255,000 feet, and Nova Scotia, 30,000 feet; total 1,878,000 feet, valued at \$20,423.

THE clearances from the port of Jacksonville, Fla., last week were as follows: Steamer City of St. Augustine for New York with 350,000 feet, and by the Algonquin 300,000 feet. The steamer Cherokee took out 280,000 feet. Schooner Caroline Hall cleared for Philadelphia with 220,000 feet, and the schooner Daisy with 270,000 feet. It is estimated that the vessels now in port will carry away more lumber than has been exported during any month of the present year.

MESSRS. H. C. HARDING & BROS., of Houston, Texas, are erecting a box factory in that city. The building will be a wooden structure 65x52 feet, one and a-half stories high for the present, and so constructed that it can be enlarged as business expands in volume. The factory will be fitted with the most approved machinery and will turn out boxes of all kinds, from a butter tray up to the largest size dry-goods box. It will give employment to about thirty hands at the start.

THE lumbermen who are to constitute the Southern Pine Co. of Georgia met in Savannah on the 15th inst. and completed their organization. Those present at the meeting and representing their respective firms were Messrs. I. J. McDonough and W. B. Stilwell, of Savannah; J. K. Clark, of Darien; L. R. Millen, Henry P. Talmadge and C. C. Southard, of New York. All of the properties adjacent to Savannah operated by these firms are expected to go into the new company. The company will have its headquarters in Savannah, and will begin business with a paid-up capital of \$1,500,000, with the privilege of increasing it to \$5,000,000.

Iron Markets.

CINCINNATI, July 13.

The features of the market that have been the most notable the past week are the strong demand that has sprung up from what might be called the rank and file of consumers, taking the place of the big deals that were current in May and June; the prolongation of the coke strike in Virginia, affecting now the supply of fuel from the Kanawha district, and stopping several furnaces in Virginia and Ohio; the continued rise in Bessemer, the rapid depletion of stocks at furnaces, and the slow increase of production.

Although the trading of the week has been mostly for small or moderate amounts of iron, the aggregate tonnage has been large—certainly equal to the current output. That consumption is going along at a rapid rate is proved by the urgency of foundries and mills to get forward iron on old contracts. Deliveries that have been held up for months are now being rushed in. This leads furnacemen to believe that the large consumers will again be in the market for round blocks sooner than they have anticipated.

The theory advanced in these reports some time since that current consumption was about 100,000 tons per month ahead of production has further support. The report of the Iron Age of July 11 shows reduction of stocks in June 104,750 tons, while the May decrease was a trifle less than 100,000 tons. July will likely show a further sharp decrease, for in spite of the gradual blowing in of idle furnaces, things are happening constantly to restrict the output of those in blast and delay those intending to start. Bessemer pig is the centre of interest, and moves more rapidly than foundry and forge grades. Sales are reported in Pittsburgh at \$14 and \$14.25, a rise of over \$4 a ton. No further advances in pig are reported. The Southern furnaces are quite willing to let present prices stand for the summer, but will go along with the procession if further advances are in order.

We quote for cash f. o. b. Cincinnati:

Southern coke No. 1 foundry.....	\$12 00@12 50
South. coke No. 2 foundry and No. 1 soft.....	11 50@12 00
Lake Superior coke No. 1.....	12 50@13 50
Lake Superior coke No. 2.....	12 00@13 00
Hanging Rock charcoal No. 1.....	15 50@17 00
Tennessee charcoal No. 1.....	13 50@14 50
Jackson county silvery No. 1.....	14 00@15 00
Southern coke, gray forge.....	11 00@11 50
Southern coke, mottled.....	10 75@11 00
Standard Alabama car-wheel.....	15 00@16 00
Tennessee car-wheel.....	14 50@15 00
Lake Sup'r car-wheel and malleable.....	14 25@14 75

ST. LOUIS, July 13.

The advance last week of June scared off buyers, and a waiting disposition prevailed to see whether prices would be maintained. Consumers now find the market even stronger than they expected, and considerable activity has developed during the past week. Unless all signs fail, we can confidently expect further advances.

We quote for cash f. o. b. St. Louis:

Southern coke No. 1.....	\$12 50@12 75
Southern coke No. 2.....	12 00@12 25
Southern coke No. 3.....	11 75@12 00
Southern gray forge.....	11 75@12 00
Southern charcoal No. 1.....	14 50@15 00
Ohio softeners.....	14 00@14 50
Lake Superior car-wheel.....	14 50@15 00
Southern car-wheel.....	16 00@16 50
Genuine Connellsville coke.....	4 75
West Virginia coke.....	4 75

CHICAGO, July 13.

The market continues firm, with fair demand. Buying has not been heavy during the past week, but there are some good-sized inquiries out at the present time which will no doubt lead to sales, as there is every probability of another advance in prices during the present month.

Foundrymen and manufacturers generally report increasing business, and there is a disposition on the part of consumers to anticipate deliveries on their orders, and furnaces are pushed to their utmost to satisfy the demand.

We quote for cash f. o. b. Chicago:

Southern coke No. 1 soft & No. 2 fdy.....	\$12 50@12 75
Southern coke No. 2 soft & No. 3 fdy.....	12 25@12 75
Ohio Scotch softeners No. 1.....	13 50@14 00
Lake Superior charcoal Nos. 1 to 6.....	14 00@14 50

BUFFALO, July 13.

There has happily been less disposition on the part of buyers to contract larger amounts than their requirements for the period intended to be covered, so that business in this market has taken a steadier tone, and while running large, appears to be for legitimate early consumption.

In all directions we find coke and bituminous furnaces loaded so heavily with orders that there is a strong aversion to taking on anything additional.

The advanced prices are cheerfully accepted by the buying community, which recognizes they are badly needed by iron-makers, and that the possibility of sustaining the new position promises better things for it.

Lake Superior charcoal is selling well, but does not share the activity of other kinds of pig.

We quote for cash f. o. b. cars Buffalo:

No. 1 foundry strong coke iron Lake Superior ore.....	@ \$13 25
No. 2 foundry strong coke iron Lake Superior ore.....	@ 12 75
Ohio strong softener No. 1.....	@ 13 75
Ohio strong softener No. 2.....	@ 13 25
Jackson county silvery No. 1.....	@ 15 75
Lake Superior charcoal.....	@ 13 50
Southern soft No. 1.....	@ 13 50
Southern soft No. 2.....	@ 13 00
Hanging Rock charcoal.....	@ 18 50

BOSTON, July 13.

There has been a little falling off in the demand for pig iron during the last week. This, we presume, was to be expected in view of the heavy buying previously reported, as well as the effect the last advance in prices had upon consumers; furthermore, the months of July and August have always been looked upon as quiet months.

Prices remain very firm, and as the furnace companies throughout the country are much further sold ahead than they would prefer to be under existing circumstances, it is evident that values will remain where they are until another advance is made.

We quote for cash delivered Boston:

Alabama No. 1 foundry.....	\$14 00@14 25
Alabama No. 2 fdy. and No. 1 soft.....	13 50@13 75
Alabama No. 3 fdy. and No. 2 soft.....	13 25@13 50
Alabama No. C. C. car-wheel.....	18 00@18 50
Strong L. S. coke iron No. 1 foundry.....	15 00@15 75
Lake Superior charcoal car-wheel.....	16 50@17 00
American-Scotch (Northern) No. 1.....	15 00@15 75
Jackson county silvery No. 1.....	17 00@17 50

NEW YORK, July 13.

The buying movement so far in New York and within a radius of 100 miles has been to an extent of a speculative nature, caused by favorable reports from the empire west of the Hudson river. Buyers who thought they had gone in too deep now find that they have taken contracts to cover their purchases, and before snow flies in the fall our market here will witness the activity of the present Western market.

We quote for cash f. o. b. New York:

No. 1 standard Southern.....	\$13 75@14 00
No. 2 standard Southern.....	13 00@13 25
No. 1 standard soft.....	13 00@13 25
No. 1 foundry lake ore coke iron.....	14 75@15 25
No. 2 foundry lake ore coke iron.....	14 25@14 75
Lake Superior C. C.....	15 25@15 50

PHILADELPHIA, July 13.

The market for raw and finished material is stronger than ever, and the only weak feature to report, which by the way is an encouraging feature, is that the sellers of pig metal and its products are all afraid that circumstances beyond their control will force them to put up prices too fast. It is to be hoped that the six weeks of hot weather still left to complete the summer will check for the time being the buying movement.

We quote for cash f. o. b. Philadelphia:

Standard Alabama No. 1 X.....	\$13 75@14 00
Standard Alabama No. 2 X.....	13 00@13 25
Standard Southern No. 1 soft.....	13 00@13 25
Lake ore No. 1 X.....	14 75@15 25
Lake ore No. 2 X.....	14 25@14 75
Lake Superior charcoal.....	15 25@15 50

ROGERS, BROWN & Co.

A DISPATCH from Mobile states that a steamship has been loaded with 325 tons of Alabama coke as part of a Mexican cargo. The coke is shipped by the Mobile Coal Co., and is said to be the first considerable export of coke from this port. It will be tested in one of the furnaces of one of the Mexican smelting companies.

FINANCIAL NEWS.

Alabama Bankers.

The Bankers' Association of Alabama at its recent meeting adopted resolutions opposing the coinage of silver at a ratio of 16 to 1, but favoring a coinage which will maintain a parity of silver and gold. The association has elected the following officers: President, J. W. Whiting, of Mobile; vice-president, J. M. Davidson, of Birmingham; treasurer, T. S. Plowman, of Talladega; secretary, T. O. Smith, of Birmingham.

Additional Dividends.

In addition to the dividend disbursements noted in its last issue, the MANUFACTURERS' RECORD has received the following reports:

Industrial Companies—Eufaula (Ala.) Grocery Co., 3 per cent. semi-annual; Cherry Cotton Mills, Florence, Ala., 3 per cent. quarterly; Raleigh (N. C.) Hosiery Mill, 4 per cent. semi-annual (13½ per cent. added to surplus); Baltimore Fire Alarm Co., 1 per cent.; Harmony Grove (Ga.) Cotton Mills, 12½ per cent. semi-annual; American Graphophone Co., Washington, 7 per cent. annual; Clover Cotton Manufacturing Co., Columbia, S. C., 10 per cent. annual.

Financial Corporations—Wachovia Trust Co., Winston, N. C., 3 per cent. semi-annual; Marietta (Ga.) Trust Co., 4 per cent. semi-annual; Hernando Insurance Co., Memphis, Tenn., 4 per cent. semi-annual; Capital City Insurance Co., Montgomery, Ala., 4 per cent.; Davis & Wiley Bank, Salisbury, N. C., 4 per cent. semi-annual; Polk National Bank, Bartow, Fla., 5 per cent. semi-annual; American National Bank, Macon, Ga., 2 per cent. semi-annual; Mercantile Savings Bank, Baltimore, 3½ per cent. annual; Bank of Portsmouth, 4 per cent. semi-annual; People's Bank, Portsmouth, 3 per cent.; Merchants and Farmers' Bank, Portsmouth, 4 per cent. semi-annual; Crowley (La.) State Bank, 4 per cent. semi-annual.

New Corporations.

A State bank with \$50,000 capital has been organized at Hattiesburg, Miss.

Schmelz Bros., of Newport News, Va., have decided to open a dime savings bank in connection with their private bank.

A bank has been opened at Morgan, Texas, with the title of the Morgan Bank. It has \$25,000 capital. J. C. Tandy is president.

The Garneau Investment Co. of St. Louis, with capital stock of \$350,000, has been incorporated by Mary L. Garneau, John B. Weld, John B. Garneau and others.

The Clifton Park Building and Loan Association of Baltimore has been incorporated by Wm. J. Clendenin, Wm. V. Wilson, Jr., Wm. H. Logue, J. C. James, Wm. J. Jackson, H. E. Rawlings, J. H. Vonderhorst, Samuel Swan, Thomas A. Swann, Arnold Schmick, Henry J. Bentzel, Jr., and Alonzo Slaysman. The capital stock is \$600,000.

New Securities.

The Lookout Ice & Storage Co., of Chattanooga, Tenn., will issue \$30,000 in 6 per cent. bonds. C. W. Biese is one of the directors.

An issue of \$50,000 of Madison county, Ala., bonds have been sold for 4 per cent. premium. The entire issue was taken by W. Rison & Co.

The question of issuing \$1,000,000 in 5 per cent. bonds by Jacksonville, Fla., for improvements has been settled, and W. N. Coler & Co., of New York, have secured the issue for negotiation.

Financial Notes.

N. W. HARRIS & Co., holders of Middleborough, Ky., bonds, have agreed with the

city council to refund them at 4 per cent. The amount is \$150,000.

MESSRS. B. BLANTON & Co. have succeeded H. D. Lee & Co. as bankers at Shelby, N. C.

MR. W. C. HALE has been elected president, and Mr. H. P. Williams, secretary, of the Southern Mutual Building and Loan Association of Atlanta, Ga.

CAROLINA MINING INTERESTS.

Great Activity Predicted in the Early Future.

Mr. H. C. Demming, of Pennsylvania, who has given some years of study to the gold and precious-stone interests of North Carolina, and is now located at Demming, McDowell county, in that State, in a letter to the Charlotte Observer says:

"Geology, mineralogy and mining are about to take on new life in North Carolina. I am led to this conclusion by the increased interest of scientists in the rocks, pebbles, sands, earths and specific minerals found in the Old North State.

"The subject of gold-mining by modern appliances is being entered into very largely, and much capital is being invested. Prospectors are busy everywhere, and much land is being purchased by that careful, conservative, calculating element which a few years ago would have looked upon gold prospects east of the Mississippi river as Utopian in the extreme. A few pioneers have demonstrated practically that gold not only exists in paying quantities in the new South, but in fabulous amounts; that by economical management even surface ores are profitable, and that the deeper into the earth in a large majority of cases the higher grade the ore. And this is reasonable if the theory is correct that the gold was caught when the rocks which have an affinity for it were in molten form, and gold being very much heavier than the surrounding rock, would naturally sink as far as possible in the mass. An experience of many years in mining leads me to this belief after very many practical demonstrations, and this has been especially in North Carolina. I believe, therefore, that now we are in the early dawn of an epoch of gold-mining in North Carolina which will reach amazing proportions.

"And there is no lack of other minerals. I have just completed a classification of 136 species gathered from an area of less than five square miles, and this does not include two rare minerals, quite recently found, which do not appear in any work on mineralogy. Such a variety stands unequalled anywhere, excepting possibly Victoria, Australia.

"Quite a number of the 136 are known as the rarer minerals, some of which have within a few years grown important commercially, as zircon, euxenite, cerite, corandum, samarskite and monazite. The last-named mineral is much sought for by reason of its cerium salts for the American Welsbach light, and its thoria for the European thorium light. Until lately the American monazite was not giving complete satisfaction, because the thoria seldom averaged more than 3 per cent.; and though the metal thorium in Europe brings \$70 per pound, it was claimed it did not pay to extract it from a 3 per cent. mineral, with an average cost of ten cents per pound and the freights and risks before the mineral was ready for home manipulation. But now comes to light a monazite in southern McDowell county which yields from 10 to 18 per cent. thoria, or a higher average than any monazite anywhere in the world found in commercial quantities. How much of an area this high-grade monazite covers is now undetermined, but there is at least a territory of six square miles, with a good prospect of the extension of the boundaries.

"Perhaps the most important recent discovery in mineralogy is that of argon and helium in samarskite and euxenite. Helium is said to be the principal element of the sun; and as Franklin caught and harnessed electricity, may not some one rise up in North Carolina to harness helium, and give us an artificial light so near like daylight that some of our near-sighted friends will not be able to distinguish the difference."

A Merited Success.

The growth of Southern business done by Northern concerns is so rapid that frequently one hears of the establishment of branches of such firms at convenient points in the South. The Stilwell-Bierce & Smith-Vaile Co., of Dayton, Ohio, is one corporation whose energy and enterprise, combined with the merit of its manufactures, have caused its name to become a household word, so to speak, in the communities where water-power and steam mechanism are largely used. Thus far it has transacted business through its able Southern representative, Mr. J. W. Taylor, at Atlanta. He, however, has recognized the needs of a department warehouse in the city to meet the demands of customers, and the concern, agreeing as to its value, has decided to open a depot in Atlanta in charge of Mr. Taylor which will be supplied with steam and power pumps, electric pumps; centrifugal and rotary pumps, Victor turbine water-wheels, feed-water heaters, boilers, engines, shafting, pulleys and gears, pipe fittings, hydrants, valves, ice machines, repair parts, etc. The principal business of the company is the manufacture and building of cottonseed-oil mills, city and private water works, erecting large steam plants for cotton mills, and building turbine water-wheels for cotton mills and electric-light plants.

The Stilwell-Bierce & Smith-Vaile Co. has been closely identified with the industrial development of the South, and its progress in this direction is well indicated by the latest departure of the company.

TRADE NOTES.

MR. W. H. A. LANGE, of Baltimore, whose advertisement appears elsewhere in this issue, has recently placed some new machinery in his plant of the most improve type for doing model and other work. He makes a specialty of designing and building models, special machinery and of perfecting inventions.

THE Daugherty Typewriter Co., of Pittsburg, Pa., expects to occupy its new factory this month. The value of the plant is about \$25,000 and the company will turn out 2000 machines a year. A White & Middleton gas engine will furnish the power for running the works. The Daugherty typewriter will be displayed at the Atlanta Exposition.

THE list of building material and supplies handled by Owen Tyler, the well-known dealer in this class of goods, embraces the latest products tending towards economy, elegance and security in building construction. A recent addition is the Kinnear & Gager Co.'s steel ceilings, rolling blinds and fire shutters, for which Mr. Tyler has taken the agency.

WE learn that the Nicholson File Co., Providence, R. I., whose output is said to be more than 50 per cent. of the entire file product of this country, has caused to be posted in its three factories, two at Providence, R. I., and one at Pawtucket, R. I., notices announcing a material advance in wages paid employees. This increase will effect upwards of 1000 hands, and on the part of this company was a purely voluntary act.

THE Mercantile Trade List Supply Co., 601 Times Building, Chicago, Ill., is making a specialty of furnishing lists of the names and addresses of persons engaged in any trade, profession or occupation in any State or Territory of the United States. Reliable lists of this character are very useful to merchants and manufacturers in sending out circulars, catalogues, samples, etc., as the exact field is reached and close contact secured with buyers.

THE business of E. & B. Holmes, the widely-known Buffalo (N. Y.) builders of barrel and woodworking machinery, has been turned into a

stock company. A charter has been obtained for the E. & B. Holmes Machinery Co. with a capital stock of \$100,000 under the laws of New York, with Edward Holmes, president; Britain Holmes, vice-president and treasurer, and Edward B. Holmes, secretary. This corporation succeeds to the business of the firm, and will continue the progressive policy which has made the concern one of the most influential of its class.

IN a recent illustrated article describing an important invention in engine lathes a typographical error classed the machine as a "Springfield Miller." The correct title is the Springfield Muller, and by this name it is well known in the engine lathe world, being recognized as an outgrowth of modern requirements that meets all the conditions of the work for which it is built. It receives its title from the designer, Mr. E. A. Muller, who has a wide reputation as an inventor of labor and time-saving tools, being the originator of the famous Cincinnati Muller lathe which is still being manufactured. The Springfield Machine Tool Co., of Springfield, Ohio, makes the Springfield Muller.

AMONG the many buildings lately equipped with the Guibert swinging hose-rack, John C. N. Guibert, patentee and manufacturer, No. 39 Cortlandt street, New York city, have been: York Card & Paper Co., York Pa.; Woman's College, Baltimore, Md.; Friends' Asylum for Insane, Philadelphia, Pa.; the grand stand of the Philadelphia Baseball Park, Philadelphia, Pa.; hotel, Ocean City, Md.; Hotel Royal Poncianna, Palm Beach, Fla.; Vance Block, Indianapolis, Ind.; Hensel, Colladay & Co.'s building, Philadelphia, Pa.; Hennen Building, New Orleans, La.; New County Farm, Goffstown Centre, N. H.; United States postoffice and courthouse, Lowell, Mass.; Gilbert School, Winstead, Conn.; Bryant School, Duluth, Minn.; Irving School, Duluth, Minn.

By actual test a saving of 42½ per cent. of coal and the services of one laborer is being made by the Troy Fertilizer Co., of Troy, Ala., as a result of the adoption of the Keene fuel economizer and smoke consumer, made by the Keene Machine Co., Dallas, Texas. After giving this experience in a recent letter, the Troy Company expresses itself as more than satisfied at the result. It is generally recognized that under ordinary conditions a large percentage of the heat potentials of coal are lost and perform no service. To lessen this great waste is a problem which the progressive coal user is trying to solve. The experience of the above-mentioned company seems to demonstrate that the Keene device is proving itself to be the solution of this difficulty. The manufacturer also lately received a letter from the American Straw Board Co., Quincy, Ill., stating that the device installed at its works was entirely satisfactory.

WASTE of fuel in producing steam, the cause and the remedy are points which will interest all steam users. A pamphlet on the subject has been published by L. Metesser, 712 Union street, New Orleans, La. Attention is called to the fact that many manufacturing plants are of small beginning and irregular growth, resulting in the installation of boilers and furnaces of various types, sizes and grades, assembled without proper consideration and constituting the most successful fuel-destroying outfits it is possible to build. It is pointed out that providing the boilers with properly designed and constructed furnaces will in most instances result in a modern plant that will produce more and drier steam with less and often only half the fuel now consumed. The pamphlet says: "Steam production is not given the consideration it requires, and, in many instances, not understood. Such questions as 'will your boiler burn this, that or all kinds of fuel,' again, 'does your furnace make steam quickly' is often asked. This is no doubt in many instances merely the result of habit, but often from the want of proper understanding. The fact is the boiler does not burn fuel and the furnace does not make the steam, their functions being as widely different as if they had no connection in the plant. The furnace can only burn the fuel, which, in different types, ranges from perfect combustion to simple destruction. The boiler must take up the heat generated by the furnace, absorb and transmit same to the water to convert it into steam, which, according to the type of boiler, regularity and intensity of heat from furnace, will govern the quantity within capacity of boiler, and be in quality from dry to saturated, the former being for all purposes more effective than the latter." Summing up the features characteristic of a furnace that will give the best results, the pamphlet states that it "must combine the essential principles of a gas producer and regenerative furnace, which, by the ignition of the gases where and as soon as formed, gives it, by utilizing the primary heat, an advantage over any other form. The combustion then being complete, flame clean, and boilers free from soot, produces the greatest economy." In the building of this class of furnaces Mr. Metesser has established a reputation, and is prepared to furnish any details regarding their construction that may be desired.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under the head of "Machinery Wanted."

†In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ALABAMA.

Birmingham-Hosiery Mill.—E. Werblein, H. B. Herman, L. Wienstein and H. Werblein have formed the Birmingham Hosiery Mill Co. and will remove a Mobile plant to Birmingham.

Columbia-Cotton Mill.—The Columbia Cotton Mills contemplate adding several hundred new spindles.

Guntersville-Basket Factory.—D. P. Saunders & Co., of Fort Payne, have purchased and will operate the Guntersville basket factory; will employ 100 hands.

Jasper-Coal Mines.—The American Coal Co. has been incorporated by J. F. Johnston and E. W. Rucker, of Birmingham, to open mines.

Mobile-Repair Shops.—The Mobile & Birmingham Railroad will commence work in the fall on its roundhouse and repair shops.

ARKANSAS.

Clarendon-Shoe-last Factory.—H. S. Matthewman, of Dayton, Ohio, will erect a shoe-last factory in Clarendon.

Little Rock-Cotton Gins, etc.—The Standard Circular Cotton Co. will erect several plants for ginning and baling cotton and for cleaning cottonseed.*

Poplar Grove-Broom Factory.—A Mr. Patch will start a broom factory.

Prairie Grove-Tile Works.—F. A. Terpenning will rebuild his tile works recently burned.

FLORIDA.

Apalachicola-Manufacturing.—Endeavors will be made by the Board of Trade to locate cigar, sash, door and blind factory.

Crescent City-Broom Factory, etc.—C. H. Preston will establish a broom factory and grist mill.

Kissimmee-Grist Mill.—L. D. Graham has started a grist mill.

Ocala-Cigar Factory.—Adam Eichelberger will start a cigar factory.

Orlando-Syrup Factory.—John Hardeman and R. H. Marks will manufacture syrup from watermelons.

Orlando-Wine Manufacturing.—J. B. La Montague will start the manufacture of wine.

GEORGIA.

At'lanta.—Chartered: The Official Photographic Co., by Dr. Joseph Jacobs and others; capitalized at \$10,000.

Atlanta-Mining.—W. M. Everett, as attorney for J. H. Helmer, of DeKalb county; Leroy Moore, of Greenville, Mich.; Joseph Storey and G. Berger, of Hastings, Neb., has filed a petition for a charter for the Helmer Gold Mining & Milling Co. The capital stock of the company is put at \$200,000. The objects of the company are to mine gold, to buy and sell mineral lands for profit, etc., with headquarters in Atlanta.

Harmony Grove-Cotton Mill.—The Harmony Grove mill will add machinery.

Hawkinsville-Electric-light Plant.—The election

for electric lights will be held July 17. Address the mayor.

Lafayette-Cotton Mill.—The Union Cotton Mills is putting in 3072 spindles and 208 looms.

Marietta-Cannery.—J. D. Cunningham, J. L. Sibley, B. K. Couper and W. J. M. Hames have formed a company to establish cannery of 6000 to 8000 cans daily capacity.

Monroe-Cotton Mill.—The Monroe Cotton Mill, reported last week as organized, will erect a 5000-spindle mill at once; B. S. Walker, president.*

New Bridge-Gold Mine.—Mr. Benham has sold the Black gold mine to a company which will develop same.

Winder-Cotton Mill.—A company has been organized to erect a cotton mill, and subscription books are now open; Jno. S. Smith, president; W. H. Bush, A. J. Kelly and others directors.

KENTUCKY.

Carrollton-Laundry.—Mr. Forrest, of Cincinnati, and Mr. Howell, of Warsaw, have bought machinery, and will equip a steam laundry.

Henderson-Telephone System.—The Henderson Harrison Telephone Co. has been incorporated with a capital stock of \$15,000 by Montgomery Merritt, W. S. Johnson, O. W. Rash, S. K. Snead, Jas. E. Rankin, Chas. E. Dallam, all of Henderson, and H. K. Cole, of Louisville.

Henderson-Stemmy.—The American Tobacco Co. will erect a big stemmy.

Madisonville-Electric-light Plant.—I. Bailey can be addressed regarding contemplated electric lighting.

Madisonville-Electric-light Plant.—An electric-light plant will probably be erected; I. Bailey, committee.*

Russellville-Laundry.—J. C. Bailey and associates will equip a steam laundry.

LOUISIANA.

Lafayette-Sugar Factory.—It is proposed to build a sugar factory. Ralph Elliott can be addressed, and G. A. Breaux, of New Orleans, is also interested.

New Orleans-Mercantile.—The Dunning-Medine Music Co., Limited, has been incorporated with a capital stock of \$50,000; F. C. Dunning, secretary-treasurer.

New Orleans-Mercantile.—The F. A. Lambert Co., Limited, has been incorporated to buy and sell liquors with a capital stock of \$30,000; Chas. Lambert, secretary-treasurer.

MARYLAND.

Baltimore-Electric Plant, etc.—The Pennsylvania Railroad Co. will erect, it is stated, an electric plant to light its tunnels and furnish power for fans to ventilate the tunnels, etc.

Baltimore-Marble Company.—The E. B. Doran Marble Co. has been incorporated by William H. Evans, Charles R. Evans, Elwood M. Wellener, Harry L. Evans and George W. Hugg. The capital stock is \$10,000.

Baltimore-Manufacturing.—Chas. T. Westcott, of Chestertown, has secured the old Three Mills building, near Baltimore, and is remodeling same for manufacturing purposes.

Baltimore-Mercantile.—The Samuel Phillips Co. has been incorporated by James J. Swaine, Samuel Phillips, John B. Phillips, Frank N. W. Smith and William E. Phillips. The capital stock is \$10,000, and the company buys and sells grain.

Baltimore-Development.—The Suburban Development Co. has been incorporated for land improvement by Lawrence N. Frederick, Thomas K. Worthington, Louis M. Duvall, Francis H. S. Morrison and Harry F. Calhoun with a capital stock of \$10,000.

Baltimore-Packing Company.—The Killian & Darby Co., for packing oysters, fruit, etc., has been incorporated by William H. Killian, Zachary T. Darby, John Bruns, Henry D. Dreyer and Charles H. Bruns with a capital stock of \$10,000.

Cumberland-Shafting Works.—The Cumberland Steel Shafting Works is about to commence operations with fifty men.

Washington-Power Development.—Horace S. Cummings claims that Northern parties have become interested in the plan to utilize the power from the falls of the Potomac for generating electricity.

MISSISSIPPI.

Aberdeen-Oil Mills.—The new oil company has chartered as the Aberdeen Cottonseed & Linseed Oil Co., and will erect mills for manufacturing cottonseed and linseed oil; capital stock placed at \$50,000, and the incorporators are J. W. Eckford, Wm. M. Paine, B. P. Holliday and W. W. Watkins.

Brookhaven-Electric-light Plant.—The Brookhaven Manufacturing & Improvement Co. has obtained franchise to erect electric-light plant.

Scooba-Tannery.—A. A. Hammack & Co think of starting a tannery.

Scooba-Wagon Works.—J. Abercrombie has started manufacturing wagons.*

MISSOURI.

Bolivar-Electric light and Water Works.—The city has voted an additional bond issuance of \$8600 for the erection of electric-light plant and extension of mains to the water works. Address the mayor.

Kirkmansville-Lead Mine.—R. F. Bass is developing a lead mine.

Ozark-Water Works.—Construction of water supply is talked of. John C. Rogers can be addressed.

St. Louis-Barrel Company.—A. L. Messmore, L. M. Ozias, A. N. Ozias, John C. Fenimore and Clarence M. Jones have incorporated the Standard Barrel Co., capitalized at \$20,000.

St. Louis-Realty.—The Pacific Realty Co., with a capital stock of \$21,000, fully paid, has been incorporated by Redmond Cleary, John Mullally, Wm. B. Harrison and Albert L. Berry.

St. Louis-Chemical.—The Weber Chemical Co. has been incorporated; capital stock \$5000.

St. Louis-Shirt Factory.—Chartered: The Crown Custom Shirt Co., by Philip Knebel, F. H. Weber and Mary A. Weber; capital \$5000.

St. Louis-Smelting.—The Missouri Smelting Co. has been incorporated with a full paid capital stock of \$20,000 by D. P. Doak, W. C. Doak, F. M. Doak, L. M. Camp and E. R. Amisener.

NORTH CAROLINA.

Charlotte-Water Works.—The Charlotte Water Co. will put in a filtering plant.

Charlotte-Flour Mill.—The Mecklenburg Mills has awarded contract for a 75-barrel roller flour mill.

Hillsboro-Cotton Mill.—It is reported that a \$60,000 cotton mill will be erected.

Hinton-Gold-Mining.—McMasters, Grey, Thomas & Co have commenced surface work on gold deposits.

King's Mountain-Cotton Mill.—The Dilling Cotton Mill, it is reported, will double its capacity, which is now 5000 spindles and 250 looms.

Madison-Cotton Mill, etc.—J. H. Fries, of Winston-Salem; J. H. Ruffin and others have organized the Mayo Falls Cotton Mill with \$350,000 stock to develop the water-power at Mayo Rapids and erect a cotton mill.

Mt. Vernon Springs-Telephone Exchange.—J. M. Foust will establish an exchange.*

North Carolina-Gold Mine.—Chas. H. Davis, of Petersburg, Va., has secured option on a North Carolina gold mine, and will organize company to operate it.

Raleigh-Advertising Company.—The Metropolitan Advertising Co., with capital stock of \$1,000,000, has been incorporated. The head office is to be in Raleigh, with branch offices in New York, Philadelphia, Cincinnati and Chicago. The incorporators are Bernard Hooper and J. W. Jones, of Philadelphia, and J. W. Whitford, of Wilmington, Del.

Raleigh-Water Power.—John C. Drewry and W. V. Cleptan have purchased a water property near Raleigh, and will thoroughly develop same at once. Upon completion of improvements a factory will be erected.

Sanford-Vehicle Works.—James B. Kelly expects to engage in the manufacture of wagons and buggies.

Statesville-Water-power.—Geo. H. Brown has obtained an option on the Buffalo Shoals property, on the Catawba river. The property will be surveyed and thoroughly examined at once, with a view to development of the water-power, erection of cotton mills, etc.

Waynesville-Flour Mill and Electric-light Plant.—Alden & Kimsey Howell will erect a large flour mill and possibly put in an electric-light plant.

SOUTH CAROLINA.

Anderson-Oil Mill.—J. L. Glenn, W. F. Cox, P. K. McCully and others will organize a company to erect a cottonseed oil mill; capital stock to be \$25,000.

Charleston-Mercantile.—Chartered by Wm. F. Barrigan, Thomas R. McGahan, James F. Redding and R. Bee Leiby, the Edward Perry Co. to do a general stationary and book business. The capital stock is \$50,000.

Conway-Mercantile.—A charter has been issued to the Burroughs Collins Co. to do a general mercantile business; capital stock \$100,000; president, F. G. Burroughs, and secretary, B. G. Collins.

Georgetown-Electric Light Plant.—W. E. Sudlow, of Florence, S. C., has franchise for electric-light plant, and will erect same.

Hickory Grove-Transportation Company.—A charter has been issued to the Hickory Grove & Lockhart Shoals Transportation Co. to operate a transportation company between Hickory Grove, Ninety-Nine Islands on Broad river, down Broad river to Lockhart Shoals, and up the Pacolet river for eight or ten miles. The capital stock is \$10,000.

Lucknow-Lumber Company.—Preston L. Bridgers, of Wilmington, N. C.; Daniel T. McKirthan, of Lucknow, and Jacob T. Barron, of Columbia, have incorporated the Bridgers & McKirthan Lumber Co. with a capital stock of \$5000.

Newberry-Mercantile.—Chartered by Harvey E. Jones, of Baltimore, Md., and J. D. Davenport and M. A. Renwick, of Newberry, the Newberry Clothing Co. with a capital stock of \$10,000.

Williston.—Chartered: The South Carolina Co-Educational Institute; F. L. K. Bailey, president; W. A. B. Newson, vice-president; H. F. Rice, treasurer, and L. S. Mellicamp, secretary; capital stock \$5000.

TENNESSEE.

Chattanooga-Wagon Works.—George Croft, of Cincinnati, is said to intend to establish wagon works in Chattanooga.

Gallatin-Woolen Mill.—Subscriptions are being solicited to a \$25,000 woolen-mill company. Address W. A. Holder.

Knoxville-Coke Ovens.—Chartered: The Union Coke Co., by D. B. Bean, E. C. Camp, E. J. Sanford, S. P. Evans and H. M. Morrison. This is a union of several coal companies.

South Pittsburg-Foundry, etc.—The Shuster Foundry Co. has commenced work enlarging its foundry and pipe works.

TEXAS.

Alice-Telephone System.—The Alice, Wade City & Corpus Christi Telephone Co. has been organized with a capital stock of \$10,000; John Wade, president; George Newberry, vice-president, and L. G. Collins, secretary and treasurer.

Aranas Pass-Channels, Docks, etc.—Chartered: The Texas Channel & Dock Co.; principal office at Aransas Pass; purpose, the construction of a ship channel from the waters of the Gulf of Mexico along and across the waters of Aransas, Redfish, Corpus Christi and Nueces bays, etc., and to construct docks, wharves, etc.; capital stock \$1,000,000; incorporators, W. H. Stedman, E. Stedman, T. B. Wheeler and J. F. Cooper.

Austin.—Chartered: The Austin Carnival Regatta Association, capital stock \$10,000; incorporators, J. G. rdon Brown, N. V. Dittlinger, H. P. Haldeman, M. Butler and J. L. Peeler.

Brenham-Factory.—Reichardt & Seehorst are erecting a factory for patent galvanized iron flues.

Corpus Christi-Channels, etc.—Chartered: The Corpus Christi Direct Channel & Dock Co., capital stock \$1,000,000, by C. C. Heath, J. W. Ward and G. R. Scott.

Dallas-Shirt Factory.—Chartered: Vendig Bros. Shirt Co., capital stock \$10,000, by J. R. Vendig, L. H. Vendig and A. Kaiser.

Denton-Brick Works.—Chartered: The Denton Brick Co., capital stock \$5000; incorporators, W. A. Ponder, W. J. Simmons and J. A. Simmons.

Elmendorf-Sewer Works.—A sewer manufacturing enterprise to employ sixty men will be located at Elmendorf. Address Secretary Business Men's Club of San Antonio.

El Paso-Publishing.—The Modern Mexico Publishing Co., of Topeka, El Paso and the City of Mexico, has been incorporated with a capital stock of \$25,000. The directors are J. F. Daniels, J. B. Hibben and A. B. Hulitt, of Topeka, Kans.; L. Severy, of Emporia, Kans., and H. M. Pafferson, of El Paso, Texas.

El Paso-Dam.—A dispatch from El Paso says: "Dr. Boyd, agent of the New Mexico Dam & Irrigation Co., writes that one of the London directors will soon take up his residence in El Paso to oversee the building of the great Rio Grande dam above El Paso. The engineer, J. L. Campbell, is now at the site of the dam."

Fort Worth-Publishing.—There is talk of a new daily paper being established. Address H. H. Childers, of Austin.

Gatesville-Compress.—A company is being organized to erect a cotton compress.

Greenville-Ice Company.—Chartered: The Greenville Ice Co., capital stock \$50,000, by A. Ruemelli, of St. Louis, Mo.; J. B. Murphree, of Greenville, and G. Hausman, of Fort Worth.

Greenville-Mattress Factory.—W. L. Napier, of Houston, will start a mattress factory.

Houston-Iron and Brass Works.—H. A. Stopple & Co. have established iron and brass works.

Houston-Box Factory.—H. C. Harding & Bro. are equipping a box factory.

Houston-Telephone Company.—A new telephone company is organizing, and directors have been

elected as follows: W. N. Shaw, H. F. Fisher and R. B. Morris.

Hyatt-Ice Plant.—The Messrs. Rice have put in an ice machine.

Ladonia-Mercantile.—The Ladonia Dry Goods Co., capital stock \$15,000, has been incorporated by D. E. Waggoner, E. F. Wortram, R. M. Estill, L. Gough and W. E. Ross.

Ladonia-Oil Mill.—The Ladonia Cotton Oil Co. will double its 30-ton mill and probably erect a 50-bale ginnery.

Lampasas-Electric-light Plant.—The Lampasas Electric Light Co., capital stock \$10,000, has been incorporated by J. T. Donovan, E. A. Maxwell, W. L. Donovan and others.

Lott-Oil Mill.—A company will be organized to erect a 25-ton cottonseed oil mill. Address Herman Stricker, Jr., secretary.*

Luling-Cotton Mill.—The erection of a cotton mill is talked of. Address Otis McCaffey, Jr.

Mexia-Electric Plant.—Chartered: The Mexia Lighting & Power Co., capital stock \$15,000; incorporators, John W. Shoaf, William L. Hall and William L. Murphy.

Port Lavaca-Mill and Gin.—Jules Michot will erect a grist mill and cotton gin.

San Antonio-Brewery.—Contract has been let to Flaig & Wagner at \$33,500 for the erection of the Lone Star Brewing Co.'s new building.

Stephenville-Electric light Plant.—James Beech will put in an electric-light plant.

Vernon-Agricultural.—Chartered: The Vernon Farming Co., capital stock \$5000, by A. U. Thomas, W. D. Wilson and Judson Curtis.

Waco-Bagging and Ties.—Incorporated: The Improved Bagging & Tie Co., capital stock \$30,000, by L. W. Campbell, Waller S. Baker and Meredith A. Sullivan.

VIRGINIA.

Alexandria-Shoe Factory.—The new Delaney Shoe Co. has been chartered with a capital stock of \$25,000, and will operate the Potomac shoe factory. Noble Lindsey is president, and John E. Delaney, of Baltimore, Md., superintendent.

Calloway-Flour Mill.—Rennick & Hale have let contract for a 30-barrel flour mill.

Danville-Cotton Mills, Water-Power, etc.—Chartered: The Dan River Power & Manufacturing Co. with a capital of not less than \$75,000 nor more than \$750,000. Thomas B. Fitzgerald is president; Wm. P. Bethell, vice-president; R. A. James, secretary and treasurer; directors, Thomas B. Fitzgerald, W. P. Bethell, R. A. James, J. H. Schoolfield, Frank X. Burton, R. A. Schoolfield and Jas. E. Schoolfield. The charter grants the company the right to use the immense water-power in Dan river at Long Shoals, four miles above Danville; to erect cotton, woolen, iron, wood and other factories, etc.

Low Moor-Iron Furnace.—A report from Covington says that the Messrs. Shanahan, who lately leased the Buena Vista furnace, are making preparations to erect a large furnace for manufacturing pig iron near Low Moor.

Newport News-Knitting Mill.—C. M. Braxton is endeavoring to organize a knitting mill.

Norfolk-Oyster Company.—Chartered: The Mobjack Bay & Three Rivers Oyster Co., to cultivate oysters and other shell fish. The capital is to be not less than \$15,000 nor more than \$300,000. W. T. Crosby is president; Robert Johnston, secretary and treasurer.

Norfolk-Land.—A charter has been granted to the East End Land Co. to develop and improve land. The capital stock is to be not more than \$10,000. C. E. Townsend, is president; John E. Burke, vice-president; H. V. Vail, secretary and treasurer.

Petersburg-Cotton Mill.—J. A. Smith, of Bessemer City, N. C., reported last week as having bought the Swift Creek Cotton Mill, expects to throw out the old machinery next fall and put in 5000 spindles.

Saltville-Cotton Mill.—The erection of a cotton mill is talked of. Edwin E. Arnold, of Providence, R. I., is interested.

Waynesboro-Stave Mill.—Crowder & Anderson are putting in a stave mill.

WEST VIRGINIA.

Ames-Flour Mill.—A roller flour mill will be erected.

Barnum-Coal Mines.—J. W. Marsteller, J. C. Watson, Joseph Laughlin and others have incorporated a company to open coal mines near Barnum. The property to be developed is said to be thirty acres of big-vein coal and 400 acres of six-foot vein.

Charleston-Coal Mines.—Herndon & Renshaw will develop coal lands recently purchased.

Charleston-Telephone System.—The telephone company lately organized by W. P. Roberts, of Lynchburg, Va., has awarded contract for the construction of system.

Elkins-Stone Quarries.—The Readland Stone Co., of Elkins, has been formed to open quarries near Read, W. Va. W. J. Read, of Cumberland, Md., is at the head of the company.

Paden's Valley-Coal Mines.—McGrew Bros., of Pennsylvania, are opening coal mines.

Piedmont-Paint Works.—The West Virginia Metallic Paint Co. has commenced operating its works.

Shaw-Timber Lands.—W. C. White, of Cumberland, Md., has purchased 1030 acres of timber land near Shaw.

Union-Flour Mill.—S. O. Meredith has let contract for his new 50 barrel roller flour mill.

Wheeling-Oil Wells.—The Fisher Oil Co. is acquiring new lands in the Triadelphia district for development.

BURNED.

Huntington, W. Va.—The Star Lumber Co.'s mill; loss \$8000.

Nashville, Tenn.—The Tennessee Fibre Co.'s mill; loss \$20,000.

Suffolk, Va.—C. A. Vick's steam laundry slightly damaged.

BUILDING NOTES.

Atlanta, Ga.—Plans have been received for the New York building for the exposition. It is to cost \$25,000; J. E. Graybill, president of New York commission.

Atlanta, Ga.-Hotel.—Venable Bros. will remodel the Venable building into a 200 room hotel, with electric light plant and other conveniences.

Atlanta, Ga.-Hotel.—A hotel of 100 rooms will be built; contract secured by Haskins & Averill.

Atlanta, Ga.-Hotel.—Mallard & Stacy will build a 186-room hotel.

Baltimore, Md.—Chas. T. Bagby will erect a six-story 46½x100-foot building to be occupied by the Swiss Steam Laundry.

Baltimore, Md.—The Chesapeake & Potomac Telephone Co. will enlarge its building by two stories. J. E. Sperry is preparing plans.

Beaumont, Texas-Depot, etc.—The Gulf & Interstate Railroad will soon build its Beaumont depot and terminal facilities.

Centre, Ala.-Courthouse.—Cherokee county will rebuild burned courthouse at cost of \$10,000 to \$15,000. Address R. R. Savage.

Charleston, S. C.-Warehouses, etc.—The South Carolina & Georgia Railroad Co. is having plans arranged for warehouses, elevators, docks, etc., on water property just purchased.

Columbia, S. C.-College.—About \$15,000 will be expended in new building, sanitary and heating improvements to the Columbia Female College.

Cordele, Ga.-College.—The plans for the Cordele Female College have been prepared by Bruce & Morgan, of Atlanta. Bids will be called for at once by the trustees.

Forsyth, Ga.-Courthouse.—Plans will be wanted for erecting the new courthouse, to be three-stories and have ornamental metal staircase, electric lights, furnace or steam heat with patent ventilators. A large burglar-proof steel or metal vault for securities with combination or time lock, set of modern office furniture, fire-escape and bell will probably be needed; cost \$20,000. Address T. E. Fletcher, county clerk.

Georgetown, Ky.-Hotel.—S. S. Wells contemplates building a 40 room hotel, and has had plans prepared.

Guntersville, Ala.—Contract for building the new courthouse has been let to Ed. M. Wallen, of Decatur, at \$20,000.

Houston, Texas-Hotel.—Contract awarded to Bonnell, Matthews & Harding for erecting the Henry hotel and store building.

Jacksonville, Fla.-Temple.—A three-story temple will be erected. Address H. H. Richardson.

Kansas City, Mo.-Dwellings.—Jno. W. Mansur and J. W. S. Reid will each erect a \$10,000 dwelling.

Knoxville, Tenn.-Hotel.—Frank McNulty has awarded contract for erection of an 87-room hotel.

Knoxville, Tenn.-Reformatory.—G. L. Maloney is chairman of committee to build a \$12,000 reformatory.

Louisville, Ky.-Dwellings.—Boyle & Struby have prepared plans for a residence for E. C. Ashcraft to have electric bells and lighting, furnace, etc.; cost \$4000. Maury & Dodd have prepared plans for a residence to have electric bells and lighting; cost \$4000. Fred Erhart has prepared plans for a residence for Wm. Merchant to have iron mantels, electric bells, etc.; cost \$3000.

Nashville, Tenn.-Penitentiary.—The board of prison commissioners will receive until August 1 plans and specifications for the erection of the penitentiary, etc., and to cost not exceeding \$300,000. The architect whose plans are accepted shall make detailed plans and specifications and supervise the work during construction. For further particulars apply to W. M. Nixon, Chattanooga, Tenn.

Neosho, Mo.-Hospital.—For information concerning new hospital building address H. W. Sherman.

New Orleans, La.-Church.—The congregation of

the Holy Cross has obtained permit to build a three story brick building to cost \$19,000.

Owensboro, Ky.-Temple.—Contract for the new Odd Fellows' temple has been let to Jas. M. Whitehead, Jr., at \$25,000.

Paducah, Ky.-School.—Contract for building new schoolhouse has been let to Mr. Morris at \$6000.

Raleigh, N. C.-Dormitory.—Contract let to the North Carolina Car Co. at \$15,000 for new dormitory for North Carolina College.

Richmond, Va.-Church.—The Baptist City Missionary Society will build a church.

Richmond, Va.-Auditorium.—It is proposed to build a \$15,000 auditorium. Col. Jno. Murphy can be addressed.

Rocky Mount, N. C.-Warehouse.—C. C. Cooper has let contract for a tobacco warehouse 100x200 feet in size.

St. Louis, Mo.-Office Building.—Plans have been prepared for the Central Realty & Improvement Co. for a 12 story office building 288x127 feet. Reader, Coffin & Crocker, of Chicago, are the architects.

St. Louis, Mo.-Dwellings.—A. Blair Ridington has prepared plans for a residence for Mrs. F. Hockmuth, to have architectural ironwork, electric bells and lighting, furnace, etc.; cost \$5000. M. T. O. Allardt has prepared plans for a flat building for Fred J. Klaiher, to have architectural ironwork, electric bells and lighting; cost \$5000.

St. Louis, Mo.-Office Building.—Edis Wainwright will erect a \$30,000 store and office building.

Thurmont, Md.-School.—A school building will be erected. Address Frederick county commissioners.

Washington, D. C.-Dwelling.—Thos. H. Harding will erect four-story dwelling to cost \$10,000.

Washington, D. C.-School.—A new main building to cost \$20,000 will be erected for Stevens School.

Washington, Ga.—Jas. A. Benson has begun the erection of a \$10,000 brick and iron building.

Wheeling-Mercantile.—Louis J. Miller will erect a three-story 65x25-foot building.

RAILROAD CONSTRUCTION.

Railroads.

Aberdeen, N. C.—The Aberdeen & West End road has been extended four miles to Troy, N. C. The Page Lumber Co. is interested.

Anchorage, Ky.—The board of commissioners of the Kentucky Insane Asylum are considering the construction of an eight-mile road to the Ohio river. Address R. Lee Suter at Louisville.

Baltimore, Md.—The Peninsular Construction Co. has been formed by W. H. Bosley, Wesley M. Oler and others to build a railroad about sixty miles long from Queenstown, Md., to Lewes, Del., also a branch twelve miles in length from Queenstown to Centerville and Chestertown. The line will be standard gage, laid with 60-pound rails and operated by steam-power.

Batesburg, S. C.—Thomas S. Fox, T. J. Kernaghan and others are interested in securing the extension of the Carolina Midland to Batesburg. Mike Brown, at Barnwell, is president.

Big Stone Gap, Va.—A. R. Wing, of Johnson City, Tenn., has the contract for constructing five and a-half miles of road connecting the Virginia Coal & Iron Co.'s mines with the Louisville & Nashville system.

Blacksburg, S. C.—Samuel Hunt, A. Trip and other officers of the Ohio River & Charleston Company are reported as interested in the Hickory Grove & Lockhart Shoals Transportation Co., which proposes to build a road from Hickory Grove to cotton mills on the Broad and Pacolet rivers and to have a steamboat line. The capital is \$100,000.

Brooksville, Ky.—A company is being organized to build a road seven miles long between Brooksville and Wellsburg. Y. Alexander, of Brooksville, is interested.

Calvert, Texas.—A company is being formed to build five miles of railroad to the coal deposits near Calvert.

Charleston, W. Va.—A charter has been issued to the West Virginia & Southern Railway Co. for the purpose of building and operating a railroad beginning at Brownstown and running to Big Coal river, and up the Guyandotte River valley to Richmond, in Tazewell county, Va., and also another line to run up by way of Pond Fork and Oceana to Bramwell. Capital stock is \$500,000, divided into shares of \$100 each, and held by R. D. Herndon, C. C. Watts, R. G. Quarrier and J. W. Clarkson, of Charleston, one share each, and Joseph Renshaw, of Baltimore, 4996 shares. The principal office will be in Charleston. It will be a feeder of the Chesapeake & Ohio.

Charleston, W. Va.—Secretary Renshaw, of the West Virginia Southern Company, advises the MANUFACTURERS' RECORD that R. T. Herndon has been elected president, and C. C. Watts, vice-president. The road is to extend from

Brownstown along the forks of the Coal river. Bids are wanted for building five miles at once.

Clarksburg, W. Va.—The railroad which Hon. J. N. Camden and others are promoting, it is stated, will extend from a point near Clarksburg, on the Monongahela River Railway, to Fisher's Creek, on the Ohio river.

Ellaville, Fla.—It is reported that the Suwanee River Company has arranged to build its proposed extension of forty-five miles from Luraville to Trenton. B. R. Guest is general superintendent.

Fort Smith, Ark.—The St. Louis, Siloam & Southern Company has increased its capital to \$1,550,000. Hon. W. M. Fishback is interested.

Galveston, Texas.—It is stated that Galveston parties have secured a controlling interest in the Gulf & Interstate road, and will have it in operation to Beaumont by November 1.

Johnson City, Tenn.—It is reported that the Ohio River & Charleston Company has let a contract for grading ten miles of its proposed extension from Unaka Springs to Wilder's Forge. Samuel Hunt, of Cincinnati, is president.

Kansas City, Mo.—The Kansas City & Northern project, it is stated, has reached a point where contracts for construction will soon be let to the Terminal Construction Co., of Kansas City. The road is to be seventy miles long, extending from Kansas City to Trenton, Mo., where it will connect with the Des Moines & Kansas City, extending to Cainesville, Iowa, 112 miles, and which is to be made a standard-gage road.

London, Ky.—President G. L. Prescott, of the Kentucky Southwestern Company, advises the MANUFACTURERS' RECORD that the company intends constructing a line from a point on the Louisville & Nashville, near Mount Vernon Station, to the junction of the Rockcastle and Cumberland rivers. The distance is about forty miles. It is expected to issue bonds to the extent of \$20,000 per mile. Bids from contractors will be solicited.

Louisville, Ky.—Surveys have been completed for the "cut off" of the Louisville & Nashville. It will extend through Shelbyville and Christiansburg, and shorten the distance about eleven miles between Louisville and Christiansburg. Chief Engineer Montfort may be addressed.

Marshall, Texas.—The promoters of the line from Marshall to Center, sixty miles, have organized the Marshall, North & South Company. W. M. Johnson and H. B. Pitts are interested.

Mobile, Ala.—The Drake & Stratton Co., of Philadelphia, is reported to have become interested in the proposed Mobile, Jackson & Kansas City line and may be the contractor for it.

Mobile, Ala.—The Cotton Exchange and the Chamber of Commerce have endorsed the Mobile, Jackson & Kansas City Company, and favor the proposition that citizens take \$125,000 of its stock. H. Austill is president.

New Orleans, La.—What is known as the Shell Beach road is to be rebuilt, and it is stated, provided with modern locomotives and cars. George Taylor is general manager.

Opelika, Ala.—J. L. Cowan and others are interested in building a steam dummy line from Opelika to La Fayette, twenty miles.

Panther, W. Va.—The Panther River Company has completed its track one and a-half miles and graded about five miles. W. B. Hooker is engineer. The road is expected to extend twenty five miles along Panther River valley.

Paris, Texas.—The parties interested in the Paris, Hearne & Gulf road state that they have secured enough assistance to begin construction work in October. The road will first be built between Paris and Hearne. H. Davis, of Hearne, is president.

Shreveport, La.—It is stated that W. Buchanan and W. T. Ferguson, of Stamps, Ark., are about to let contracts for a railroad line thirty miles long in Northwest Louisiana, between Shreveport and Minden. The road will penetrate a timber tract.

Staunton, Va.—The Chamber of Commerce is considering the idea of a railroad from Staunton to North River Gap to connect with the Chesapeake & Western, now being constructed. Jed Hotchkiss is among those interested.

Tuscumbia, Ala.—It is stated that J. T. Cross, of Chattanooga, Tenn., who has secured the contract for building the Tuscumbia extension of the Louisville & Nashville, is about to begin work.

Walterboro, S. C.—The Walterboro & Western Company has begun the work of improving its roadbed with the view of operating passenger as well as freight trains. J. R. Stokes is one of the company.

West Point, Ga.—Bartow T. Smith has the contract for constructing the six miles of the Chattahoochee Valley road, which is to be operated by steam dummies. Rolling stock is to be bought. Address President Lanier.

Electric Railways.

Alexandria, Va.—Material is being purchased to extend the Washington, Alexandria & Mount Vernon electric line from Arlington to Waterloo. D. W. Holden is superintendent.

Austin, Texas.—The electric road from the city

to the Colorado river dam has been completed and is in operation.

Baltimore, Md.—Jones, Pollard & Co. have secured the contract for building the Catonsville extension of the City & Suburban electric system. F. H. Sloan is chief engineer.

Basic City, Va.—A company may be formed to build an electric railroad from Basic City to Bridgewater, Va.

Birmingham, Ala.—It is reported that the Birmingham Railway & Electric Co. has begun the work of rebuilding its lines for electric motors. The East Lake road will be the first to be changed.

Bridgewater, Va.—D. G. Whitmore and G. W. Berlin are interested in the scheme to build an electric line from Basic City to Bridgewater to connect with the Chesapeake & Western road, now being built.

Fairfield, Ky.—About \$20,000 has been subscribed towards stock for building the proposed electric road from Louisville to Fairfield. E. H. Bridwell, of Fairfield, and James McKinney, of Louisville, are interested.

Hillsboro, Texas.—It is reported that Boston parties have secured an interest in the Hillsboro street railroad and will rebuild it for a trolley line.

Hot Springs, Ark.—A company is being formed to build an electric road from Hot Springs to the Ouachita river.

Kansas City, Mo.—The Kansas City Elevated Railway Co., of which Robert Gillham is manager, proposes to build an elevated viaduct 644 feet long for an electric and cable road. It is to cost \$40,000.

Knoxville, Tenn.—The West Knoxville Street Railway Co. will relay several of its lines with 56 pound rails. A power house may be built. R. M. Rhea is president.

Ocala, Fla.—The Merchants' Union is considering the idea of building an electric line to Silver Springs. Mayor T. G. Reardon is interested.

Vicksburg, Miss.—It is stated that arrangements have finally been completed for the building of a trolley line in Vicksburg. C. R. McFarland may be addressed.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Baling Machinery.—The Standard Circular Cotton Co., Little Rock, Ark., wants machinery for baling cotton.

Boiler.—R 197, Sun Office, Baltimore, Md., wants a ten to twenty horse-power portable steam boiler; state size, condition and price.

Boiler and Engine.—Wanted, a six or eight horse power portable engine and boiler and ten horse-power boiler; state price and manufacturer. Address P. O. Box 660, Baltimore, Md.

Boilers and Engine.—The Geo. K. McMechen & Son Co., Wheeling, W. Va., will need an engine, new or second-hand, from thirty-five to fifty horse-power; also will be in market for one or two tubular boilers, sixty inches in diameter and sixteen feet long, four or six-inch tubes.

Bridge.—Bids wanted on iron bridge. Address the commissioners of Rutherford county.

Cannery Machinery.—G. I. Ragsdale, Hazlehurst, Miss., wants addresses of manufacturers of evaporators and bleachers for fruit and vegetables.

Cotton Gins and Cleaning Machinery.—The Standard Circular Cotton Co., Little Rock, Ark., wants machinery for ginning cotton and cleaning cottonseed.

Cotton Mill.—The Monroe Cotton Mill will want 5000-spindle equipment; B. S. Walker, president, Monroe, Ga.

Cotton-mill Machinery.—The Stonewall Manufacturing Co., Stonewall Station, Miss., will contract for 10,000 spindles, etc.

Cotton-mill Machinery.—O. H. Parker, Anniston, Ala., wants lamps for manufacturing lamp wicking.

Cotton mill Machinery.—The Thurlow Cotton Manufacturing Co., Thulow, Pa., will buy some new machinery for spinning warp yarn.

Creamery Machinery.—T. J. & E. H. Anderson, Eutaw, Ala., wants catalogues and prices of creamery machinery.

Deep-well Pumps.—J. L. Ludlow, Winston, N. C., desires manufacturers to furnish him descriptive information of their appliances and methods for raising water from wells of 100 to 300 feet depth.

Dry-kiln.—The Cottonwood Box & Lumber Co., 829 Union street, New Orleans, La., wants a steam hot-blast kiln of 25,000 feet capacity per twenty-four hours.

Elevator.—The Geo. K. McMechen & Son Co., Wheeling, W. Va., will want an elevator, 6x8-foot platform, to operate fifty feet by steam-power.

Electric Lighting.—Bids are wanted to furnish the city with thirty or more arc lights of 2000 candle power; specifications and particulars from I. Failey, committee, Madisonville, Ky.

Electric-light Plant.—The Bureau of Yards and Docks, E. O. Matthews, chief, Washington, D. C., will receive proposals until July 24 for electric-light plant; specifications and blank forms on application to commandant of Washington Navy Yard.

Engine.—R. S. Reinhardt, Lincoln, N. C., wants a fifteen horse power side-valve second-hand engine.

Hay Cutters.—P. B. Sublett & Son, Staunton, Va., want addresses of manufacturers of hay cutters.

Hotel Furniture.—Salem Graham, Palatka, Fla., will want furniture for hotel.

Lathe.—T 58, Sun Office, Baltimore, Md., wants a second-hand screw-cutting lathe, 12-inch swing, length of bed four feet, good condition and cheap.

Lumber Machinery.—The Lone Star Lumber Co., Texarkana, Texas, may soon want two saw trimmers, four-saw edger, steam feed and slab chain.

Metal Work.—Sealed proposals will be received until the 25th day of July for the metal work for the Chandelier light tower, Louisiana; plans, specifications, forms of proposal and other information may be obtained on application. Address James B. Quinn, U. S. A., New Orleans, La.

Mustard Mills.—The Geo. K. McMechen & Son Co., Wheeling, W. Va., will want one or two mustard mills, with stones, all complete, new or second-hand.

Oil Mill.—Builders of cottonseed-oil mills should correspond with Herman Stricker, Jr., Lott, Texas.

Planer.—The Cottonwood Box & Lumber Co., 829 Union street, New Orleans, La., wants a planer.

Press and Kettles.—The Geo. K. McMechen & Son Co., Wheeling, W. Va., will want two 100 or 120-gallon jacket kettles for cooking jelly and one juice press, knuck'le jointed, new or second-hand.

Pump.—The Cottonwood Box & Lumber Co., 829 Union street, New Orleans, La., wants a standard underwriters' fire-pump, eight inch suction, six-inch discharge.

Pump.—The Rockdale Improvement Co., Rockdale, Texas, wants a duplex steam pump of 750,000 gallons capacity per twenty four hours.

Railroad.—Rafael Gutierrez, Bogota, Colombia, South America, wants to know what is the model railroad for a plantation, particulars of arrangements, control, plans, maps, etc.; give full explanation, estimates, etc.

Rails.—The Tallahassee Southeastern Railway wants fifty miles of relaying 56-pound rails and fastenings for cash, to be delivered at St. Mark's, Fla. Address J. M. Mayo, general manager, Ocala, Fla.

Rails.—Wanted, five miles of second-hand rails for horse-car line. Address, stating price, Box 5339, Boston, Mass.

Rails.—Wanted, good second-hand steel rails, 35 or 40-pound, and fastenings for five miles of railroad. Address T. H. Leslie, vice president Stuttgart & Arkansas Railroad Co and Pine Bluff & Eastern Railroad, Gillett, Ark.

Railway Equipment.—Bids are wanted on 40 to 50 pound iron or steel rails to lay a tram of twenty miles; also on one freight dummy engine (giving horse-power); on lighter engine for passengers, two coaches, two freight and two flat cars; all to be good second-hand, and to be delivered at Opelika, Ala., ten days from date of contract. Address McGehee, Driver & Co., La Fayette, Ala.

Railway Supplies.—The Warren Land & Lumber Co., Warren, Texas, will probably want air brakes for lumber cars.

Rock Crusher, etc.—Jno. C. Drewry, chairman committee, Raleigh, N. C., wants to buy rock-crushing outfit, including crushers, elevators and screens; capacity to be 125 tons daily.

School Furniture.—The commissioners of graded schools, Winston, N. C., wish to buy fifty single-seat desks suitable for pupils from fifteen to twenty years old; a so one desk for teacher. Address, with cuts, full description and lowest prices delivered here, G. W. Hinohan, secretary.

Starch Machinery.—T. D. Anderson, Winona, Miss., wants information of machinery for manufacturing starch from potatoes; give prices, etc.

Talc.—D. T. Clippinger, Lookout Mountain, Tenn., wants to correspond with users of talc.

Tank.—The Saxe-Gotha Mills, W. P. Ro-f, president, Lexington, S. C., wants lowest cash price on one 10,000 gallon yellow pine water tank delivered.

Tannery.—A. T. Woodward, Valdosta, Ga., wants complete particulars regarding tannery.

Telephone Equipment.—J. M. Foust, Mt. Vernon Springs, N. C., wants telephone equipment, including twenty miles of wire and twelve phones.

Tent.—J. Myers, 605 Third avenue N. W., Roanoke, Va., wants a tent 16x20 or 16x24 or 20x24 feet, new or second-hand.

Wagon Machinery.—J. Abercrombie Scooba, Miss., wants machinery for manufacturing wagons.

Water Works.—The Roanoke Rapids Mill Co., will buy water-wheels; W. S. Parker, president, Henderson, N. C.

CHARLOTTE, N. C.—The Buford Hotel, Charlotte, N. C., has recently been remodeled and refitted, and is receiving a liberal share of patronage. The new proprietors, Messrs. Farintosh & Amer, are both experienced hotel men, and every department is in the hands of capable assistants. †

Atlantic City and Cape May—Increased Train Service and Quickened Time.

The Pennsylvania Railroad Co. presents to the traveling public a most complete passenger service of fast trains in each direction between Baltimore and Atlantic City and Cape May over the P., W. & B. R. R. and its double lines—Philadelphia to the sea. †

Saturday and Sunday Excursion to Washington, D. C., via Pennsylvania Railroad.

Excursion tickets will be sold at all Baltimore offices July 20th and 21st to Washington and return at low rate of \$1.25 for the round trip, good for use in each direction on all regular trains, and valid for return trip until Monday, July 22, inclusive.

THE *Southern States* magazine is read by thousands of farmers, fruit-growers, stock-raisers and business men in all the North, West and Northwest, who are looking to the South as a future home and are trying to inform themselves as to the relative advantages of different parts of the South. If you have farm, garden or orchard property for sale the *Southern States* will put you into communication with buyers. Send for sample copy and rates. Manufacturers' Record Publishing Co., Baltimore, Md.; Wm. H. Edmonds, editor and manager.

Seashore Excursions via Pennsylvania Railroad.

On every Friday and Saturday until August 31, inclusive, the Pennsylvania Railroad Co. will sell for use on 10.55 A. M. and 12.05 noon trains from Union Station, excursion tickets to Atlantic City, Cape May or Sea Isle City, good for return passage until following Tuesday, at the low rate of \$4 for the round trip, which includes transfer through Philadelphia in both directions. †

Summer Vacation Tours.

The Baltimore & Ohio Railroad Co. now has on sale at all its offices east of the Ohio river a full line of tourist excursion tickets to all the lake, mountain and seashore resorts in the Eastern and Northern States, and in Canada. These tickets are valid for return journey until October 31. Before deciding upon your summer outing it would be well to consult the B & O. book of "Routes and Rates for Summer Tours." All B. & O. ticket agents at principal points have them, and they will be sent postpaid upon receipt of ten cents by Chas. O. Scull, general passenger agent, B. & O. R. R., Baltimore, Md. †

Through Parlor-Car Line, Baltimore to Saratoga.

The Pennsylvania Railroad Co. has placed in service on its train leaving Union Station, Baltimore, 10.08 A. M. week-days, a through buffet parlor-car to Saratoga. At Jersey City car is attached to the "Saratoga & Catskill Mountain Limited" over the West Shore and Delaware & Hudson Railroads, arriving at Saratoga 9.15 P. M. Returning, car leaves Saratoga 8.25 A. M. This through car adds immensely to the facilities of travel between Baltimore and resorts on the Hudson, in the Catskill mountains and the famous Adirondacks region. †

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Rehoboth—Train Service from and to Baltimore.

The Pennsylvania Railroad Co. announces that, commencing Saturday, July 6, the "Peninsula Express," leaving Union Station 3.00 P. M., will connect through to Rehoboth, arriving at that point 8.02 P. M. Returning, train will leave Rehoboth 7.15 A. M. week-days. This is in addition to connections of train now leaving Union Station at 6.25 A. M., arriving Rehoboth 12.27 P. M., and returning, leaving Rehoboth 2.50 P. M. week-days.

Winter Tours to Texas and Mexico.

The easiest and best way to reach the winter tourist resorts of Texas and Mexico is via the International Route (International & Great Northern Railroad), which forms a portion of the short line from Chicago, St. Louis and Memphis to Austin, San Antonio, Houston, Galveston, Laredo and principal Mexican points. Through Pullman sleepers, without change, daily between Chicago, St. Louis and Austin, San Antonio and Laredo, St. Louis and Houston and Galveston, and between Kansas City and Fort Worth and Austin and San Antonio via Hearne. Call on nearest ticket agent for rates, timetables and full information, or for printed matter descriptive of Texas and Mexico. Address D. J. Price, assistant general passenger agent, Palestine, Texas. †

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Atlanta Loan & Investment Co. 21	Black, M. M. 18	Camden Steel Roofing & Cor. Co. *	Davis, L. W. 41	Empire Paint & Roofing Co. 29	Fay, J. A., & Egan Co. 32	Guarantors Liability Indemnity Co. 33	Hartford Steam Boiler Inspection & Insurance Co. 33	Ingersoll-Sergeant Drill Co. 20	Jenkins Bros. 42	Keene, Geo. C., & Co. 28	Lefel, James, & Co. 35	Mann & Co. 23	McNeill, J. C., Co. 14	Paxson, J. W., & Son. 37	Peacock, George. 37	Queen City Supply Co. 12	Record Printing House. 17	Southern Pacific Co. 39
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PROPOSALS.

PROPOSALS FOR WATER WORKS AT MORRISTOWN, TENN.—Sealed proposals will be received by the Board of Water Works Commissioners of Morristown, Tenn., until 2 P. M., August 5, 1895, for constructing a system of Water Works, and for furnishing the materials for same. Works will embrace approximately six and one-half (6½) miles of pipe and appurtenances. Plans and specifications will be on file, and may be seen at the office of the Board, and copies of specifications, forms, etc., may be obtained from the secretary of the Board after July 10th, 1895.

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JOHN SHARP.

GEO. S. CROUCH, Secretary.

Board of Water Works Commissioners.
J. L. LUDLOW, Engineer,
Winston, N. C.

TREASURY DEPARTMENT, Office Supervising Architect, Washington, D. C., July 9 1895.—Sealed proposals will be received at this office until 2 o'clock P. M. on the 24th day of July, 1895, and opened immediately thereafter, for all the labor and materials required for the trench excavation and concrete foundations, etc., for the U. S. Postoffice building at Buffalo, N. Y., in accordance with the drawings and specification, copies of which may be had at this office or the office of the Superintendent at Buffalo, N. Y. Each bid must be accompanied by a certified check for a sum not less than 2 per cent. of the amount of the proposal. The right is reserved to reject any or all bids, and to waive any defect or informality in any bid, should it be deemed in the interest of the Government to do so. All proposals received after the time stated will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked, "Proposal for the Trench Excavation and Concrete Foundations, etc., for the U. S. Postoffice Building at Buffalo, N. Y." and addressed to WM. MARTIN AIKEN, Supervising Architect.

NOTICE TO CONTRACTORS.

Sealed bids will be received by the undersigned at Dublin, Laurens county, Ga., up to 12 o'clock on the 6th day of August next for the building of a **BRICK COURTHOUSE.** Plans and specifications can be seen at the Clerk's Office, Dublin, Ga., and at office of Bruce & Morgan, Architects, Atlanta, Ga.

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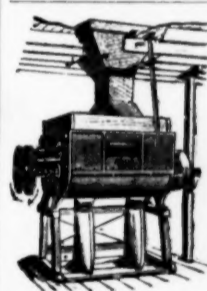
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5000 ft. ¾ in., ½ in. and ¼ in. second-hand Cable.
1600 ft. 1½ in. new Transmitting Cable.
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3500 ft. 1 in. second-hand Pipe.
One 48 in. Cupola, complete with Blower.

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1 18x8 Pratt & Whitney Lathe.
1 18x8 Lodge & Barker Lathe.
1 18x12 Lodge & Barker Lathe.
1 19x11 Lodge & Davis Lathe.
1 20x8 Niles Lathe.
1 20x8 Sellers Lathe.
1 20x12 Muller Lathe.
1 20x14 Sellers Lathe.
1 22x10 Niles Lathe.
1 24x16 Sellers Lathe.
1 24x18 Leonard Lathe.
1 26x13 Gleason Lathe.
1 26x20 Pond Lathe.
1 30x22 Pond Lathe.
1 30x28 Sellers Lathe.
1 34x14 Steptoe Lathe.
1 42x24 Putnam Lathe.

PLANERS.

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1 16x16x3 Pratt & Whitney Planer.
1 24x24x5 New Haven Planer.
1 24x24x6 Bancroft Planer.
1 24x24x7 New Haven Planer.
1 25x25x0 Bancroft Planer.
1 26x26x6 Lodge & Davis Planer.
1 30x30x7 Sellers Planer.
1 30x30x10 Bement Miles Planer.
1 34x34x7 New Haven Planer.
1 36x36x8 Niles Planer.
1 36x36x10 Whitcomb Planer.

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1 5 ft. Niles Plain Radial Drill.
1 6 ft. Lodge & Davis Radial Drill.
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1 20 in. Lodge & Davis Sliding Head Drill.
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1 15 in. Traveling Head Shaper.
1 16 in. Lodge & Davis Shaper.
1 20 in. Lodge & Davis Crank Shaper.
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1 8 ft. Greenwood Boring Mill.
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